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A copy of this Supplement is inserted in every number issued of "THE CHEMIST AND DRUGGIST."

SPECIAL EXTRA SUPPLEMENT.
MARCH 19,
1887.

BUSINESSES WANTED.
BUSINESSES FOR SALE.
PREMISES TO LET.

AUCTION SALES

PARTNERSHIPS.
SITUATIONS WANTED.
SITUATIONS VACANT.

EXCHANGE COLUMN

Advertisements for this Supplement must be prepaid, and can be received at the Office, 42 Cannon Street, until 5 p.m. on Thursday afternoon, or by first post on Friday morning of each week.

Remittances payable to EDWARD HALSE, crossed MARTIN & CO. Stamps are taken in payment.

The Terms for Advertisements in this Supplement will be found printed under each heading.

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177/34.

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7.—**PARTNERSHIP (MIDLANDS).**—Large town; Retail and Dispensing Business; half share for disposal, with succession; returns nearly £1,400, with good profits; convenient house; terms and full particulars on receipt of reference.

8.—**ESSEX.**—Good town; Branch Business for disposal; Light Retail and Dispensing; returns last year nearly £300; capable great extension; good house; large and well-stocked garden; price £200.

9.—**SURREY.**—Large town; death vacancy; for immediate disposal; returns last month nearly £80; good position; large double-fronted shop; main position; good house, &c.; terms, &c., to be arranged.

10.—**SOUTH COAST.**—Good business locality; Retail and Dispensing; returns over £1,400, with good profits; several profitable Proprietary articles attached; good house, &c.; about £2,000 required; please enclose business card or reference.

11.—**KENT.**—Good market town; Retail and Dispensing, of good class; returns nearly £1,150; capable great extension; good house, garden, &c.; open to the fullest investigation; price about £950.

12.—**SOUTH DEVON.**—Seaside; unopposed; good country business; Light Dispensing and Prescribing; returns nearly £400; full prices; good house; rent £25; large well-stocked garden, with out-buildings; about £200 required; good boating and fishing.

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ON Wednesday, April 27th next, at 6 P.M., Messrs. A. Langerhuizen and H. J. Koper, Brokers, at Amsterdam, will Sell in public Auction, by order of their Principals, an extensive Steam Quinine Works, including Factory, Buildings, Dwelling-houses for the Manager and the Staff, &c., all recently built and in thorough repair, together with a large building plot attached; the whole situated in the immediate vicinity of the City. The Machinery and Implements will be offered separately on Tuesday, April 26th, and the entire concern on Wednesday, May 4th, at 3 P.M. The auctions will be held at the building known as the "Oudezyds Heeren Logement" at Amsterdam.

Further information may be obtained upon application to Messrs. A. Langerhuizen and H. J. Koper at Amsterdam.

IMMEUBLES EN HOLLANDE.

VENTE PUBLIQUE D'UNE VASTE FABRIQUE DE QUINQUINA (DITE "AMSTERDAMSCH E CHININE FABRIEK.")

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By Order of the Executrix of the late Mr. Richard P. Williams, Chemist and Druggist,
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TENDER.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

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AN OLD-ESTABLISHED Business; one of the best suburbs of Manchester; corner shop, main thoroughfare; full prices; returns—drugs, &c., quite £300 or more, Gilbey's about £340; price, fixtures, &c., £125; stock at valuation; rent £40; lease if desired. Apply to Robert Innes, Solicitor, 53 Princess Street, Manchester.

WHOLESALE DRUG BUSINESS.—For disposal, a first-class profitable going Business in Aberdeen; successfully carried on for upwards of 20 years; easy entry; satisfactory reasons for giving up; the premises are good, and well adapted for such a business; may be either purchased or had on lease; partners retiring; introduction given. Full particulars on applying to Davidson & Sim, Wholesale Druggists, Aberdeen.

A GOOD-CLASS Ready-money Dispensing, Prescribing, and Retail Business, with Teeth Extracting, in a large town in North of England; is a spacious, well-fitted, double-fronted (plate-glass) corner shop, situated in two principal streets; has a large genuine stock of the best quality; net profits last year exceeded £287, for 1885 £262; good house; price £520. Full particulars, address, "Dens," care of Messrs. Hodgkinson, Stead & Treacher, 198 Upper Whitecross Street, E.C., where view of premises may be seen.

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KENT.—Well-fitted Retail, Dispensing, and Prescribing trade, making a guaranteed net profit of £400 yearly out of a return of £900; 12-roomed house, two separate entrances, therefore is adapted for letting; has let all rent in season; strictest investigation allowed and courted; price £750 with furniture, or £675 without; chance seldom met of securing a business in a healthy seaside town. Apply, "Thanet," 5 South Lambeth Road, S.W.

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LOCUM TENENS (would suit anyone who is studying).—Advertiser wants assistance from 6 till 11 o'clock on Saturday evenings; also for a day or two at Easter. Apply personally at 315 Edgware Road, W.

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MESSRS. GIBBS & GURNELL, Ryde, are prepared to take a well educated youth as an indoor Apprentice; premium moderate and by arrangement; also a Junior to keep the books and assist at the Dispensing counter; state height, age, salary, and last situation.

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Special charges are made for Advertisements under this heading, which can be obtained on application.

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EXCHANGE COLUMN.

FOR DISPOSAL.

Dental.

Three forceps, upper molar, right and left, lower molar, also gum lancet; 10s. or exchange. Sheel, Lowfell, Gateshead-on-Tyne.

Drugs and Chemicals.

Thirty ozs. oil of peppermint as imported, 30s.; no samples. "Pip," 42 Cannon Street, E.C.
About 40 ozs. mercury, 5 ozs. oil of cloves; offers? 191/6.

Magenta crystal dye, 6s. 6d. lb.; cardinal dye, 4s. lb., in 1-lb. tins; carriage paid; cash with order. Mason & Co., South Shields.

Syrup hypophosph. co., 56 lbs.; identical in composition, taste, and appearance with Fellows's; 1s. 6d. per lb., single lb. post free, 1s. 10d. Neville Leslie, 5 Avenue Parade, Accrington.

About half ton hop resin; this is a very powerful extract of hops, and is admirably adapted for the manufacture of lozenges, pills, balls, &c.; price per lb., 12 lbs., 28 lbs.; offers requested. Hay, Chemist, Beverley Road, Hull.

Educational.

Squire's "Companion," 2; "Pharmacopœia," with additions; Taylor's "Medical Jurisprudence"; Attfield's "Chemistry," with Will's "Minor Notes" in margin; what offers? Holloway, Leamington Spa.

Beasley's "Receipts," 8th edition, 2s. 9d.; "Pocket Formulary," 7th edition, 2s. 9d.; Muter's "Chemistry," 5s. 6d.; Cassell's "Bible Educator," 2 vols., 9s. 6d.; carriage free. Gradidge, Chemist, Andover.

Buckmaster's "Advanced Chemistry;" Odling's "Chemistry;" Attfield's "B. P., 1867;" Valentine's "Text-book of Practical Chemistry;" "Progress Pharmacy," Bell & Redwoods; offers. Lowe, Chemist, Lynn.

"Homœopathic Vade Mecum," medical and surgical, Ruddock, 820 pages; "Esoteric Anthropology," Nichols, 5s.; "Animal Physiology," Cleland, 2s. 6d.; "Anatomy of Nervousness and Nervous Exhaustion," Campbell; "Aids to Long Life," Davies 2s. 6d.; "Principles and Practice of Medicine," Peet, 1864, 16s.; all complete, what offers? Hinkley, Seacombe, Cheshire.

Noad's "Electricity," 300 illustrations, 5s.; Park's "Chemical Catechism," 5s.; "Youatt on the Horse," 5s.; Muirpratt's "Chemistry," published at 4l., 25s.; Hoblyn's "Dictionary of Medical Terms," 5s.; Churchill's "Diseases of Children," 6s.; Bentley's "Manual of Botany," 6s.; "Taylor on Poisons," 6s.; Squire's "Pharmacopœia of the London Hospitals," 3rd edition, 8s.; "Taylor on Bee-keeping," 2s.; Shaw's "Medical Remembrancer," 1s. Apply to J. Johnson, 78 Dartmouth Park Hill, London, N.

Griffith's "Materia Medica and Pharmacy;" Semple's "Metals;" Semple's "Botany;" Rivers Wilson's "Chemical Notes;" Will's "Practical Botany;" "Elements of Pharmacy;" "Materia Medica Cabinet;" "Materia Medica," with plates; Griffith's "Art of Prescribing;" Lescher's "Elements of Pharmacy;" Fluckiger and Hanbury's "Pharmacographia;" Meadow's "Midwifery;" Tanner's "Clinical Medicine;" Erichsen's "Surgery," 2 volumes; what offers, cash? Carnahy, Chemist, Blyth.

Major materia medica cabinet, nearly 200 specimens, inorganic and organic, including alkaloids, &c., 25s.; Southall's ditto, at half-price, 15s. Wheldon, Chemist, York.

Proprietary Articles.

A few dozen shilling boxes Cowan's asthma cigarettes, 5s. dozen. Weddle, Gateshead.

Nine dozen Leath & Ross's medicines, in good condition; offers wanted for cash or exchange. 16 Bishop's Road, W.

Harris's brass paste (clean labels), 9 dozen 6d., and 4 dozen 3d., 30s. the lot. Cocher-King's Lyun.

Needham's polishing paste, 10 dozen 6d. size, 2s. 6d. per dozen, new and clean. Halford, Chemist, New John Street West, Birmingham.

About $\frac{1}{2}$ ton Myers' royal cattle spice to be sold cheap for cash or anything useful. Address, P. A. Stevens, 72 Mansfield Road, Gospel Oak, N.W.

Merrick's husk and diarrhoea mixture for lambs, 2 1-gallon and 1-quart jars; what offers or exchange? Morgan, Drug Stores, Nethells, Birmingham.

3 dozen Wood's dandruff pomade; 3 dozen Wood's tooth paste, 1 4s. 6d. Pierce's golden medical discovery, 3 dozen Symington's Egyptian food, 6 dozen Mather's nigrine, 1 dozen Thornton's toilet cream, 2 dozen Hayman's halsam, 1 dozen Page Woodcock's pills, 1 dozen Dr. Rooke's pills. 192/41.

Apparatus.

Fletcher's automaton blowpipe, cost 10s., 6s.; foot blower, cost 27s., 17s. 6d., good as new. Gibson, Chemist, Fleetwood.

Literature.

Pharmaceutical Journal for 1885, 1836; what offers for whole or part? Will be sold cheap. Rennie, Chemist, Stonehaven.

What offers for *Pharmaceutical Journal* reprinted on Saturdays? M. J., 8 Rock Street, Bury.

Cash offers wanted for 9 volumes, unbound, clean. *Chemist and Druggist*, 1878 to 1886. 193/21.

Soda-water Machinery.

For sale, Mondolot's No 3 soda-water machine, with fast-and-loose pulleys, or hand power; also double filling rack for cork bottles and syphons; equal to new; suitable for chemist or small dealer. Apply to George Meadows, 46 High Street, Leicester.

Shop Fittings.

Mahogany panels: 14-foot counter; upright glass case, fig. A 56; dispensing counter; cheap. H., 4 Stratford Road, Kensington.

13-ft. long wall fixture for grocer, shelves cornice, canisters, drawers, &c., 9 feet high, almost new, 10l.; coffee mill, 60s.; golden syrup tins; 8 ft. 6 in. nest tea bins, 60s. E. Natali, 207 Old Street, E.C.

No. 11 composition mortar and pestle (Maw's), cost 12s., sell for 6s.; two composition funnels, No. 9 size (Maw's), cost 5s. each, sell for 3s. each. T. H., 12 Canohury Place, Islington, N.

What cash offers? Iron mortar (diameter 15) and pestle; lot of Bohemian retorts, stoppered and plain, 4 to 16 ounces; Fletcher's gas furnace and crucible, with chimney, &c.; 6 tea canisters, green and gold, 16 by 10, inches; York glass percolator, half-gallon. Wheldon, Chemist, York.

Handsome nest of 65 drawers, polished baywood glass knobs, 10 ft. 6 in. by 3 ft. 1 in. shelving above in three compartments, and cornice—offers; sign, "Chemist and Druggist," gold letters, 12 ft. by 2 ft., good condition, 15s., cost 40s.; 2-gall. iron mortar and pestle, 12s. 6d.; Butcher's 5l. 5s. homœopathic case, three-fourths full—offers; 3 galls. Woodfall's stone-coloured paint, unopened—offers. Blacklock, Haslingden.

Glass Bottles.—Job lines.—About 4 gross 2-oz. nickel-capped pomades, 10s. per gross; 4 gross $\frac{3}{4}$ -oz., 7s.; 19 gross 1-oz. green vials, burst off, 1s. 9d.; 4 gross 4-oz. can de Colognes, 10s.; 12 gross 6-dram oval essences, 4s.; 6 gross 10-oz. Kalis boxwood, corked, 18s.; 1 gross 14-oz. limes, 10s.; 3 gross $\frac{1}{2}$ oz. opal pomades, screw nickel capped, 10s.; 10 gross 2-oz., 16s.; 4 gross 4-oz., 20s. per gross, quality guaranteed; sample of either kind post free 4 stamps, or of each line 18 stamps. Address, Hearn, 381-3 Kingsland Road, London.

12 ft. wall-fixture, drawers, lockers, shelving, cupboards, and cornice, 8l. 10s.; 16 ft. wall-fixture (mahogany), silvered plate-glass cupboards between shelving, glass labels and glass knobs to drawers, 12l. 10s.; several others equally cheap; 9 ft. wall-case, as fig. A 88, but, instead of being bent-glass cases, between top and bottom cases there are sloping cases, 14l.; 10 ft. ditto, ditto, 15l.; 15 ft. ditto, ditto, 18l.; 12 ft. ebouissé wall case, 8 ft. high, 9l. 10s.; a number of solid mahogany-top counters, framed and moulded, pine stained and polished fronts, from 5 ft. to 12 ft. long, at 6s. per ft. run; also a number of black and gold fronted counters with mahogany tops, at 6s. per ft. run; 12 ft. mahogany counter, 7l. 10s.; plate-glass rounded counter, 12 ft. long, 9l. 10s. E. Natali, 207 Old Street, E.C.

A number of flat glass cases, various sizes, from 2 ft. 6 in. to 6 ft. long, as fig. 2, to open at back, also some to open at top, to be sold very cheap, to make room, also a number as fig. 3; 2 ft. long, 30s.; 2 ft. 6 in. long, 32s.; 2 ft. 8 in. long, 35s.; 3 ft. long, 40s.; 3 ft. 6 in. long, 45s.; as fig. A 8, 5 ft. long, 95s., 6 ft. long, 5l. 10s.; as fig. A 15, 9 ft. long, 8l., 5 ft. 6 in. long, 4l. 10s.; as fig. A 16, 3 ft. long, 55s., 3 ft. 6 in. long, 60s., 3 ft. 9 in. long, 65s., 4 ft. long, 70s.; as fig. A 17, 4 ft. long, 75s.; as fig. A 18, 5 ft. long, 5l. 6 ft. long, 5l. 10s.; 12 in. high, glass ends silvered-glass back, to open, 7l. 10s., a great bargain; toothbrush-cases, as fig. A 9, 35s., as fig. A 10, 50s.; as fig. 50, 6 ft. case, to open in front, plate-glass and mahogany stand, 8l.; a silvered plate-glass, in ebouissé frame, 7 ft. by 2 ft. 9 in., 75s.; a ditto, ditto, 7 ft. by 2 ft. 6 in., 3l. 5s.; 7 ft. mahogany dispensing counter and screen, fitted with sink and drawers, very elaborate, 11l. 10s.; several very massive wall cases, from 10 ft. long, cheap. E. Natali, 207 Old Street, E.C.

Plate-glass sponge-cases, fig. A 41, 65s.; ditto, ditto, as fig. A 43, 95s.; show-steps, A 37, 50s.; as fig. A 39, 15s.; desk and glass case, A 31, 60s.; a ditto, ditto, 50s.; a number of dispensing-screens, from 5 ft. to 8 ft. long, glass case at each side, with silvered plate glass in centre and marble slab in front, tablets on top of cases, and shelves at back for dispensing bottles, very elaborate, from 6l. 10s.; a 3 ft. ditto, as fig. A 54, 45s.; 3 ft. 6 in. ditto, 55s.; 4 ft. ditto, 60s.; 4 ft. 10 in. ditto, 70s.; 5 ft., as fig. A 55, 95s.; 6 ft., 5l. 10s.; 6 ft. 6 in., 6l.; 7 ft. ditto, 6l. 10s.; and a quantity of other screens very cheap; several pair specie jars, Royal Arms, equal to new, on mahogany stands, from 24 in. to 40 in. high, price 4l. to 6l. 10s. pair; carboy, 16 gallons, with mahogany stand; a number smaller sizes; dome covered pink ointment jars, gold labels, any names, 3s. 9d. each; a lot of second-hand green, blue, 3 and 4 lb.; a $\frac{1}{2}$ gal. displacement apparatus, fig. 53; black store bottles, 1 gal., with japanned cans, 1s. 3d. each; 30 dozen shop bottles, 7s. 6d. dozen. E. Natali, 207 Old Street, London, E.C.



1.—10/6



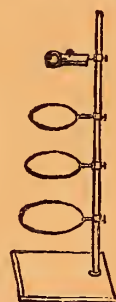
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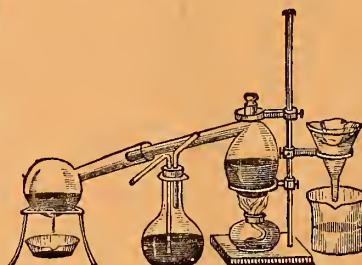
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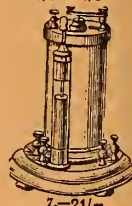
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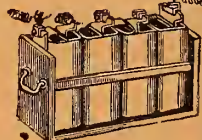
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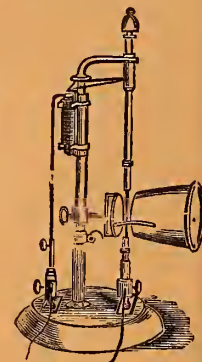
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EACH fluid drachm contains 8 grains of anhydrous Calcium Phosphate combined with Lactic Acid.

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comparing the prices of the different Brands, to take into consideration that the bulk of those sold with
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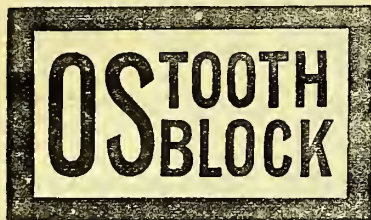
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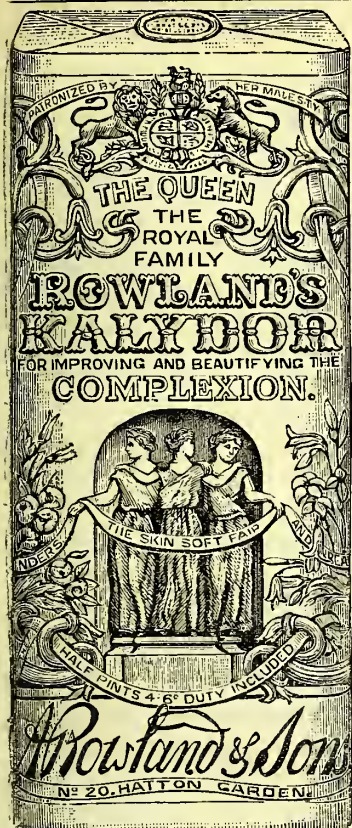
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THE GASEOUS FLUID.

Unmatched for colic or gripes and debility in horses, for colds, chills, shivering fits, and diarrhoea in cattle, calves, and sheep. 20s. per dozen box.

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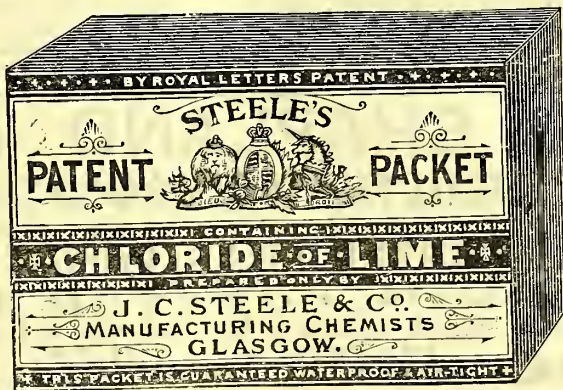
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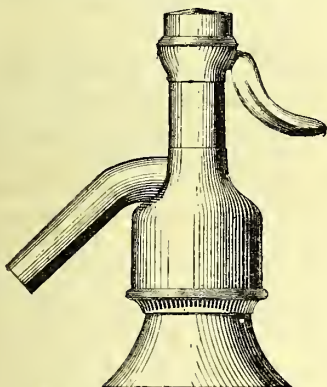
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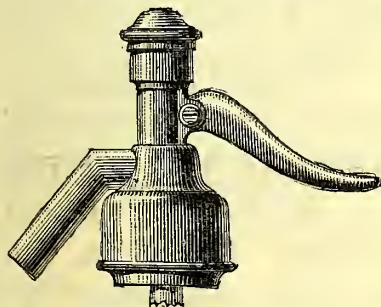
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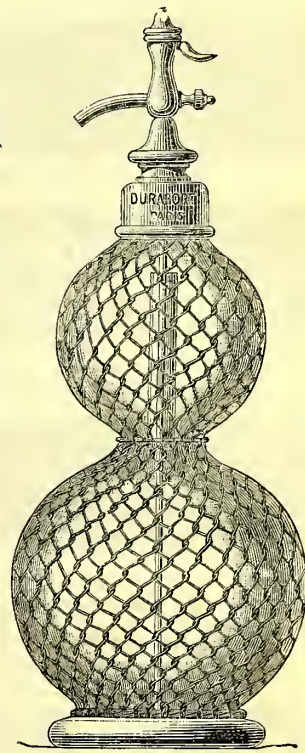
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St. George's Middle St.,

NORWICH,

January 19th, 1887.

For some time past we have been in communication with the Inland Revenue, Somerset House, respecting the manufacture of our "Liebig's Extract of Meat and Malt Wine, with Quinine." An objection was raised to the employment of Port Wine as it contained Tannic Acid and might precipitate the Quinine, so we substituted Sherry, and have received the following important letter from the Board:—

"INLAND REVENUE,

"SOMERSET HOUSE, LONDON, W.C.,

"18th January, 1887.

"Gentlemen,—Your further letter of the 18th ultimo having been laid before the Board of Inland Revenue, I am to acquaint you in reply that, although Tannic Acid is not wholly absent from the Wine used in the preparation of the fresh sample of 'Liebig's Extract of Meat and Malt Wine, with Quinine,' forwarded to this Office by the Supervisor at Norwich on the 31st ultimo, the Wine is so far free from it as to satisfy the objection raised in Mr. Forsey's letter of the 17th ultimo. So long, therefore, as the article is prepared in accordance with the sample referred to, **THE BOARD WILL NOT REQUIRE A WINE LICENCE** to be taken out to authorise its sale. "I am, Gentlemen,

"Your obedient Servant,

"W. B. HEBERDEN,

"Messrs. Coleman & Co.

"Assistant Secretary."

NO LICENCE IS THEREFORE REQUIRED for the sale of our "Liebig's Extract of Meat and Malt Wine, with Quinine." Your orders will oblige either direct or through the Wholesale Houses.

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NOTE.—Syphons made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanting, particularly for private-house use. Send for sample; forwarded upon receipt of 2s.

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	By the gross, per doz.	Less than 1 gross, per doz.
Quart size	£1 2 0	£1 4 0
Pint size	1 1 0	1 3 0
Half-pint, Pear shape	1 0 0	1 2 0
Octagonal vases, any colour (including Azure Blue)	1 4 0	1 6 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished, from 9s. per doz. extra. A charge is made for packing, except when ordered in our patent bin cases (holding one dozen each, price 2s. 6d. each).

Please Note.—B. & F. are the only firm manufacturing Syphons in England that do not supply them filled, and so compete with their customers' trade.

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12½ gals. for £1, Cash free.
SPECIAL LINES FOR CASH BUYERS

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PETER TYRER, The "Borough" Ketchup & Sauce Maker,
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ESSENCE
OF BEEF.

CONCENTRATED BEEF TEA.
MEAT LOZENGES, &c.

The Trade would study their interests by introducing our preparations to their customers, for the reason that they are not only the best made, but at the same time the cheapest, and bear a larger margin of profit. A small trial order will prove the truth of the above statement.

Proprietors of the Delicious

"O. K." SAUCE.

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The London Two Shilling Tea... 2/-

The London 2/8 Assam Tea... 2/8

For Testimonials and References see the full page Advertisement which appears monthly in this Journal. Last insertion February 26, 1887, page 25.

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LONDON.

T. & F. J. TAYLOR'S



AËRATED WATERS,
Newport Pagnel.

ESTABLISHED 1835.

SODA. POTASH, SELTZER, AËRATED (without Alkali), and LITHIA WATERS, LEMONADE AND GINGER ALE.

Each Bottle is protected by a Label bearing the Signature of the Firm.

Purity and Excellence of the Water certified by Analysis by Professor ATTFIELD, Ph.D., F.O.S.

HOP BITTERS.

Manufacturers: **THE HOP BITTERS COMPANY, LIM.,**
41 FARRINGTON ROAD, LONDON, E.C.

THE Company take this opportunity of specially warning the Trade against selling or offering for sale, any so-called HOP BITTERS which are colourable and fraudulent imitations of their HOP BITTERS, or which are so put up as to lead to the belief that they are the Manufacture of the Company; and the Company impress upon the Trade the danger they run in offering such compounds for sale. It is already well known that the Company have fully determined to uproot such traffic, and have decided to prosecute with the utmost vigour, and to claim damages from all persons who may be detected in infringing the Rights of the Company.

EXTRACT from "THE CHEMIST AND DRUGGIST," Jan. 15, 1887:—

"A great many Infringements are made thoughtlessly, rather than fraudulently. but this thoughtlessness may become a serious matter for the infringer."

Proceedings have already been taken in the High Court of Justice, and Injunctions obtained against several Tradesmen for infringing the Rights of the Company.

Any person who may be deceived in purchasing HOP BITTERS, and be led to believe that the compounds of other persons are HOP BITTERS manufactured by the Company, are requested to communicate with the Company without delay.

We respectfully direct the attention of those Chemists throughout the United Kingdom who have written to us to our public acknowledgment (on another page) of their valued favours.

THE HOP BITTERS COMPANY, Ltd., 41 Farringdon Rd., London, E.C.

Telephone Number, 1852. **Advertisers' & Buyers' Reference List,** TELEGRAPHIC ADDRESS—**CHEMICUS LONDON.**
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Werner and Pfeiderer

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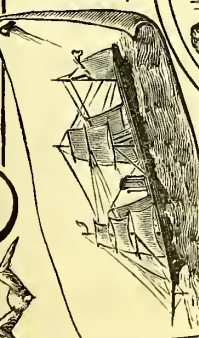
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"	"	in tins of 35 oz.....	" 14 6	"	Lozenges in boxes (the most sustaining nowishment in the smallest possible compass)	" 1/- ... -/8 ..

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Guaranteed Pure and Soluble,

Is SIMPLY UNEQUALLED, and really THE CHEAPEST
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Digested with marvellous facility by the most delicate invalids and children.
Made instantly with boiling water.

The **British Medical Journal** says:

"Van Houten's Cocoa" is admirable. In flavour it is perfect, and it is so pure, well prepared, and rich in alkaloid, that it may with great advantage be largely used in public institutions, as well as in private families."

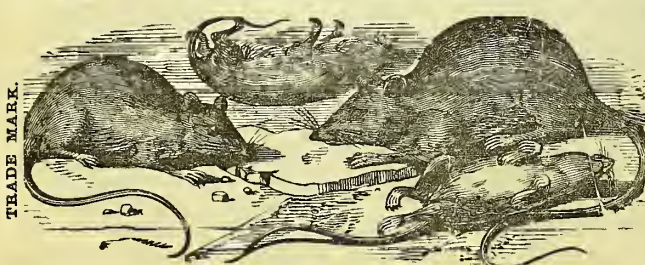
The Lancet remarks: " . . . It goes a long way, and is really cheaper to use in the end, etc., etc."

Invaluable in railway stations, hospitals, on board ship, in the camp, for workmen (at home and to take to their *work*), etc., etc.

Try it once and you will use and recommend it always.

Sample tins free through your Grocer or Chemist.

BATTLE'S VERMIN KILLER. Mice eat it readily and
Die on the spot.



KILLER. { Mice eat it readily and
Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—*Thousands might be published.*

From Mr. THOMAS COLTON, Agent for Selby. "A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet. — From Mr. EDWARD STURDY, Flemington Mills. — "as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets. — Leeds, November 8th, 1857. — I have tried BATTLE'S VERMIN KILLER, and have found it most efficacious. I enclose 2s. for two more Packets. — LARGE QUANTITIES OF RATS, THOMAS B. CARPENTAR, Mr. Secd.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

IMPROVED AGENTS FOR CHRONIC CONSTIPATION. FATS AND OILS.

Disorders of Nutrition.

Oils are everywhere employed to make the skin pliable and soft, and the recent trials with Lanoline have shown how serviceable oleaginous matters really are in restoring and maintaining the healthy function of this tissue. To the exclusion of substances like castor oil (which contains a small proportion of an acid drastic principle—ricinine), the value of nutrient oils in constipation is being more and more recognised, for, as Dr. King Chambers says, these "prevent that drying and hardening of the contents of the bowel which cause much of the inconvenience; they also augment the activity of the liver," and, lubricating the alimentary structure, it seems reasonable to suppose that they act upon the tissues of the intestine more beneficially even than upon the skin. The value of inunctions in dry and feverish states of the skin is well known, and fats are "applied to the surface of the body to prevent irritation from such excreta as urine and feces." Why not, then, employ the Solution of Cod Liver Oil to improve the irritable, dry and inactive intestinal glands? Surely, there can no more be a healthily functioning intestine without fat than there can be a healthy skin without it! Dr. Pavy says that the amount taken, even with inactivity, ought not to be less than one ounce daily, about two and a half ounces forming the average amount in the diets of the various working classes; whilst Dr. Dobell insists that the daily quantity of fat cannot be much reduced below the normal proportions "without great risk of damaging the health."

Fat is a constituent of the red blood corpuscles, and its administration increases their number. In young children particularly, it is indispensable to the maintenance of perfect health, and yet this aliment is the one in which infant foods are so often lacking. (N.B.—Peptonised Milk, with the Kepler Solution, is not open to this objection.)

Constipation and "costiveness must be regarded as a disorder of the whole system, and not of the intestinal canal alone" (Chambers). Ordinarily, under fair sanitary conditions, the metamorphosis of the tissues goes on normally enough, providing the patient is rightly fed. In the case of infants constipation may probably be ascribed oftener than not to improper feeding, as with indigestible food or food deficient in nutrient principles. Children bear well even an excess of oil, which promotes constructive

metamorphosis, and accumulates wherever tissue changes occur. The endurance of fat-eating people is proverbial, and the indispensable part played by the hydrocarbons in the digestive processes seems attested by subjective experiences of our every-day life.

Physicians in charge of some Infant Hospitals state that they seldom fail to completely overcome constipation in infants with small daily doses of cod liver oil—in the case of young infants, say a few drops sucked from the tip of the little finger three or four times a day. If the oil be given in the form of the Kepler Solution of Cod Liver Oil in Malt Extract, the child gets no fishy taste, and is supplied with a soluble malted food besides. During the last eighteen months there has been much literature in the English and Foreign Medical Journals evidencing the great usefulness of cod liver oil in constipation, and the reports that have been sent to us of trials made with the Kepler Solution have been most favourable. The advantages afforded by cod liver oil in obstinate constipation seem as obvious theoretically as they have been substantial clinically.

The Kepler Solution will soon effect a change for the better in cases with symptoms like these:—"Emaciation and voracity; the belly swelled and hard; the skin dry and harsh; the eyes red; the tongue strawberry coloured; the breath foul; the stools clay-coloured and offensive, sometimes costive, sometimes extremely relaxed." (Druitt's "Vade Mecum.")

In the costiveness of phthisis, when laxatives only add to the patient's misery, and the stomach is very irritable, a little of the Kepler Solution administered each morning for a few days often brings relief. Indeed, the Kepler Malt Extract alone is one of the best agents in both constipation and diarrhoea. Not only is it demulcent and pleasant to take, but it possesses a great advantage over saccharine matters generally, inasmuch as the maltose does not so readily undergo fermentation as glucose, &c. The powerful action of the diastase is also an important factor in that it melts the starchy matters into an absorbable form at once. A very large number of cases of constipation have become permanently well after taking this diastatic food, which is an admirable vehicle for drugs like the Valoid Fluid Extract of Cascara Sagrada, Bael Fruit, Juglans, &c., as well as a Solvent for Cod Liver Oil.

Kepler Extract of Malt and Kepler Solution of Cod Liver Oil in Malt Extract supplied in $\frac{3}{4}$ lb. and $1\frac{1}{2}$ lb. bottles.

BURROUGHS, WELLCOME & CO., Manufacturing Chemists, Snow Hill Buildings, E.C.

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TABLOIDS
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STROPHANTHUS.*Each Tabloid contains 2minims of the Tincture of Strophanthus prepared of the strength of 1 in 20, and from the seeds only.*

Strophanthus increases the power of the heart, but does not contract the arterioles like digitalis.

Dose, one to four Tabloids, to be swallowed with water.

Snow Hill Buildings, London

Our Tincture of Strophanthus was the first known to commerce, and has always been prepared from the seeds only and with the greatest care. We have not heard of a single fault being found with it.

In compliance with the advice of Professor Fraser we now prepare the Tincture of the strength of one in twenty, submitting a sample of every lot for his approval, and we are willing to receive back from any chemist having the former strength of Tincture in stock his supply of same in exchange for the present make, we giving such chemist two bottles of this for one bottle of the old strength.

Burrroughs, Wellcome & Co.,

Tincture
STROPHANTHUS

Prepared from the fully developed seed only, and according to Prof. Fraser's new (1887) formula, in proportion of 1 in 20. Dose, 2 to 10 drops, dissolved in a wineglass of water at the time of administration.

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Tincture, in $\frac{1}{2}$ -oz. bots., 12s., and 1-oz. bots., 18s. } Subject to usual discount. Can be ordered
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Tabloids, in bots. containing 100, 27s. per doz. } Please specify Burrroughs, Wellcome & Co.
Pods are sold at 2s. 6d. per oz.; Select Seeds at 10s. per oz.

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This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.



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Each 3/0	 5/6	 9/6

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PRICE 4d. PER CUBIC FOOT.

DISCOUNT TO THE TRADE.

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The only Gelatine Coated Oval Pills of ENGLISH MANUFACTURE in the Market. Special List of REDUCED PRICES on application.

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GELATINE COATED HORSE BALLS (PATENTED).

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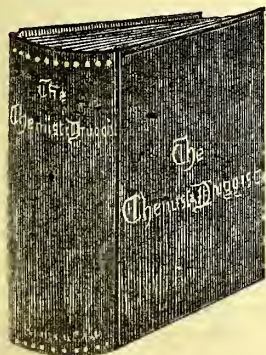
For Australasian subscribers the subsidiary journal THE CHEMIST AND
DRUGGIST OF AUSTRALASIA is included.

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THE ALBERT MEDAL.—The Society of Arts will award this medal in May next to someone who has "distinguished himself in promoting arts, manufactures, or commerce." Amongst those who have received the medal since 1864 are Michael Faraday, Baron von Liebig, M. Eugene Chevreul, Jean Baptiste Dumas, Sir William Thomson, A. W. Hofman, Louis Pasteur, and Sir Joseph D. Hooker.

The reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



SALE OF THE AMSTERDAM QUININE WORKS.—In our advertisement section will be found the announcement of the sale by auction of the Amsterdam Quinine Works at Amsterdam, on April 27 next. We understand that the works cover an area of about three-quarters of an acre.

DRUGS FOR AFGHANISTAN.—In our issue of October 16 last we announced the opening of a dispensary at Cabul, under the auspices of the Ameer of Afghanistan. We have just received a communication from the principal of the dispensary announcing his desire to purchase a considerable quantity of medicines for the establishment, and requesting to be furnished with quotations. We shall be happy to give the address of our correspondent to intending competitors for the supply of the dispensary.

THE PHARMACY ACTS AMENDMENT BILL was read a second time in the House of Lords on Thursday evening. On a subsequent page we print a full report of the speech of Lord Milltown, who introduced it. The most important statement in that speech was to the effect that the Privy Council consented to the proposal.

THE writer of a pamphlet on pharmaceutical legislation which attracted a good deal of attention some two or three years ago (Mr. G. T. Hough) sends us a startling account of pharmaceutical progress from his point of view. His communication appears on page 357.

THE Socialists in the Paris Municipal Council have advocated the establishment of municipal pharmacies to provide for a supply of cheap medicaments to the poor. The Council have for the present rejected the proposal.

SOME FILTERING PAPERS have been proved by a French chemist to contain as much as 10 per cent. of sulphate of lime (see page 351). Recently a young chemist in Edinburgh showed that a sample of distilled water contained much sulphate of lime. There seems to be a connection between the two observations.

BOTANIC BEER.—On Wednesday Sir Algernon West, the Chairman of the Board of Inland Revenue, received a deputation from Nottingham with reference to the treatment of ginger-beer and other botanical beverages as exciseable liquors. Mr. H. S. Wright, M.P., explained that it was in 1885 that these beverages were made exciseable if they contained more than 2 per cent. of proof spirit, and it was now found impossible to prepare them of less strength. Sir A. West, in replying to the deputation, said that he would require some other proposal than to levy a tax according to the rateable value of the premises. If the wishes of the deputation were acceded to, he would require to have a proposal based on the assumption that no malt nor hops should enter into the composition of the beverages, and that the only sugar used should be cane sugar.

DIARY FOR NEXT WEEK.

Tuesday, March 22.

Royal Institution, at 3 P.M. Professor A. Gamgee, F.R.S., on "The Function of Respiration."

Wednesday, March 23.

Chemists' Assistants' Association, 103 Great Russell Street, W.C., at 9 P.M. Mr. W. Baxter, Jun., on "Notes on a Tour in Scotland," illustrated by lantern slides.

Thursday, March 24.

Royal Institution at 3 P.M. Professor F. Max Müller on "The Science of Thought."

Friday, March 25.

Royal Institution, at 9 P.M. The Right Hon. Lord Rayleigh on "Colours of Thin Plates."

Saturday, March 26.

Royal Institution, at 3 P.M. The Right Hon. Lord Rayleigh on "Sound."

Football match. Pharmaceuticals v. Aldenham Institute, at Gospel Oak. Afternoon.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

QUALITATIVE ANALYSIS.

THE subject of the next exercise will be a mixture of two salts. It is to be submitted to a thorough systematic examination, such as is required to detect its constituents and to demonstrate the absence of all other substances. In reporting students are to give a brief account of the analysis, with a summary of the results obtained, distinguishing as far as practicable any accidental impurities which may be detected from the chief constituents of the mixture.

Students' applications for a portion of the mixture will be received up to Thursday, March 24, and the samples will be forwarded on the 28th.

Students' reports will be received up to April 15.

REPORTS.

The mixture of salts distributed for analysis in January consisted of 2 parts of potassium chromate and 1 part of calcium carbonate, and therefore contained in 100 parts:—

K	23.73
Ca	15.23
CrO ₄	29.94 (equal to 18 parts Cr)
CO ₃	20.00
	100.00

There were 39 reports received; only eight of these can be said to be inaccurate, and the errors were trivial except in two or three cases. The principal error arose from an imperfect precipitation of the calcium, the metal being subsequently thrown down as phosphate, in which form it was mistaken for magnesium.

Although the final results reported in so many cases were perfectly correct, there are many instances in which these results were arrived at by most defective methods. Several of the reports are little more than lists of a number of tests, applied almost at random. We must refer our correspondents to text-books on analysis for information on fundamental principles, as it would take more space than can be spared here to describe the proper methods to pursue. It is necessary to warn students against the risk of concluding that the method, or rather want of method, followed must be all right if it leads to a correct result; under slightly different conditions the same series of tests might lead to most erroneous conclusions. Any ordinary text-book which treats of qualitative analysis will be found to contain at least one general scheme of analysis which will lead to accurate results in dealing with such problems as arise in ordinary work.

PRIZES.

The First Prize for the best analysis has been awarded to HARRY DIXON FUGE, Mr. W. Platt, chemist, Matlock Bath.

The Second Prize has been awarded to

J. G. WALLBRIDGE, Mr. Vaughan, chemist, Ellesmere.

Marks Awarded for Analyses.

Harry Dixon Fuge (first prize)	98	W. Taylor	90
J. G. Wallbridge	96	J. C. Spencer	85
Gum Damar	94	Instant	85
Hugh Miller	93	J. C. Kidd	85
Perseverer	93	Habeo	85
C. R. Andrews	93	W. J. H. Baker	85
J. Stanley	90	Xylem	85
Crucible	90	A. Shaw	80

C. S. Baynton	80	Cocaine Hydrochlor.	70
J. H. B.	80	Strophanthus	65
Hopeful One	80	J. G. J. Goddard	65
F. E. E.	80	W. Burns	65
W. H. W. Peak	75	Protoplasm	65
W. R. Boyd	73	J. W. B.	60
R. C. W.	70	Drugs	60
G. F. Craven	70	Chloroform	50
C. F. S.	70	R. B.	50
G. E. S. S.	70	Sappho	35
Lettklaw	70	G. E. P.	10
G. H. Taylor	70		

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

. All communications should include the names and addresses of the writers.

JAMES STANLEY.—Your report was very satisfactory except for the omission of the test for ammonia.

PERSEVERER.—You must be cautious in drawing conclusions from the flame colouration observed when a mixture containing several metals is ignited. As a rule the sodium reaction masks all others; if you can observe the potassium colouration without the aid of a spectroscope or a blue glass you may be sure that there is very little sodium present.

CRUCIBLE.—You have made a very good beginning; your work displays the exercise of sound judgment; with increased experience you ought to do well. It would be better to write your results on a larger sheet of paper and leave yourself abundance of room.

J. C. SPENCER.—It is not quite clear what it was that you tested for potassium. If it was the residue from the evaporation of the solutions from which the other metals had been separated, then the result you obtained would be fairly conclusive evidence of the presence of potassium; but under any circumstances the platonic chloride test should be applied, or, if you have not this reagent, the tartaric acid test may be resorted to.

J. C. KIDD.—You might have derived much more information from the preliminary dry examination.

W. J. H. BAKER.—In the presence of ammonium salts, and especially the chloride or sulphate, calcium is not completely precipitated by ammonium carbonate, consequently a slight flocculent precipitate may be expected in testing the filtrate for magnesium. Unless there is a distinctly crystalline precipitate produced by the sodium phosphate, you may, if sufficient time has elapsed, conclude that magnesium is absent. If a very complete separation of calcium is desired, the only plan is to evaporate the filtrate to dryness and ignite, to expel ammonium salts, then remove the trace of calcium as oxalate, and test the filtrate for magnesium.

C. F. S.—Your results are correct, but they are not obtained in the proper way. Under different conditions your method of analysis would lead to most erroneous conclusions. The group reagents must be added in proper order to the same solution, not to fresh portions of the original solution; for example, ammonium carbonate is to be added to the filtrate from the ammonium sulphide precipitate, or to the solution in which this reagent has failed to produce a precipitate. If this course is not adopted one metal may be thrown down by two or more group reagents.

W. H. W. PEAK.—Students are not asked to give quantitative results. The exact composition of the mixture is given above for your guidance, and in order that you may know with what relative quantities you had to deal.

G. T. CRAVEN.—See remarks to W. H. W. Peak.

G. E. S. S.—See remarks to W. J. H. Baker.

LETTKLAW.—You examined the soluble portion for potassium and chromic acid only; you cannot, therefore, claim to have proved the absence of all other substances.

G. H. TAYLOR.—Your final results are quite correct, but it is remarkable that you did not detect chromium in the examination for the metals. When you passed sulphuretted hydrogen through the acid solution the chromate was deoxidised to a green chromic salt (chromic chloride). On adding ammonia you should have obtained a precipitate of chromic hydrate.

COCAINE HYDROCHLOR.—See remarks to G. H. Taylor.

STROPHANTHUS.—Your evidence of the absence of calcium and of the presence of magnesium seems perfectly satisfactory and conclusive, but the reactions you describe could not possibly have taken place.

J. G. J. GODDARD.—You should not employ a fresh portion of the solution for each group reagent (see remarks to "C. F. S."). To understand this point thoroughly you must try the analysis of a mixture of salts containing a member of each group.

W. BURNS.—The intense yellow colour of the normal chromates of the alkali metals is characteristic, and cannot be mistaken for the reddish colour of the dichromates.

J. W. B.—You state that ammonium oxalate gave no precipitate in the solution of the portion soluble in hydrochloric acid, but you do not state that you had added ammonia in excess.

DRUGS.—Your preliminary examination of the dry powder was most incomplete.

CHLOROFORM.—You did not submit the mixture to a complete systematic examination, and you did not prove anything to be absent except organic matter.

G. E. P.—On more mature consideration it may perhaps occur to you that a mixture of two salts is not likely to contain calcium, manganese, magnesium, sodium, ammonium, zinc, and the sulphuric, carbonic, sulphurous, hydrochloric, and hydrobromic radicles.

Metropolitan Reports.

PARAFFIN AS A POISON.—At the Clerkenwell Police Court on Wednesday William Johnson, 32, a bookbinder, was committed for trial on a charge of maliciously endangering the life of his wife by administering paraffin mixed with beer to her.

SUICIDE WITH OXALIC ACID.—On Wednesday Dr. Danford Thomas held an inquest concerning the death of Caroline Beale, aged 45, a married woman, who died on Saturday last. Deceased suffered from partial paralysis, and had lately been in a despondent state of mind. Dr. Forbes Russell deposed to finding the deceased quite dead. He thought that she had taken poison, and in conjunction with Dr. Pepper had determined that death was due to oxalic acid. Dr. A. J. Pepper, F.R.C.S., stated that an eighth part of the quantity of oxalic acid which deceased took was enough to cause death. The poison could be easily obtained at an oilman's for trade purposes. The jury returned a verdict of "Suicide while of unsound mind."

A DISTURBANCE IN THE SHOP.—Alice Rhodes (aged thirty-three), described as a very respectably-dressed person, was charged at the Marylebone Police Court, on Saturday, with being drunk and disorderly, and annoying Walter Jamieson, a chemist, carrying on business at 48 Baker Street, Portman Square. Mr. Jamieson said the prisoner entered his shop on Friday afternoon, and as she created a disturbance he sent for a constable, and had her removed. She soon afterwards returned, re-entered the shop, and annoyed him while he was serving his customers by brawling and throwing the things about. She had annoyed him before when she was in the same state as she was in on Friday. In reply to the charge the prisoner said she used to receive money from him regularly, but latterly he had ceased to supply her. It was on his distinctly promising never to let her want money that she left her business for him. She went to him on Friday to ask for his help. Mr. Cooke fined her 20s., or in default seven days' imprisonment.

DEATH IN A CHEMIST'S SHOP.—At Camberwell on Wednesday Mr. G. P. Wyatt held an inquest relative to the death of a woman unknown, who died in the following circumstances:—Frederick Lonnar, assistant to Messrs. Moody & Catterns, chemists, of 30 Church Street, Camberwell, stated that he was in the shop on Sunday evening when a gentleman and a lady came in. The gentleman said, "This lady is ill. May she come in?" The witness said, "Yes," and when the lady was seated she said, "I am dying; give me some medicine." Witness mixed a draught of sal volatile, and this was administered by the gentleman. A moment later the lady gave a gasp and died. The witness sent for Dr. Sargeant and went for the police, but on his return found that the gentleman had disappeared. Dr. Sargeant deposed to having made a post-mortem examination. Death was due to syncope from heart disease. The woman was about twenty-five years of age. Constable 19 P R said he found on the body a pocket-handkerchief on which was worked the name "H. Leisser." A verdict of "Death from natural causes" was returned.

CHEAP DISPENSING: CONVICTION.—At the Westminster Police Court on Wednesday Dr. Ernest Farndon, of 256 Kensal Road, Chelsea, a dispensary, was summoned at the instance of the vestry of Chelsea for dispensing a prescription not compounded of ingredients in accordance with the demand of the purchaser, Mr. Michael C. Meahy, an officer

of the vestry. Mr. Pemberton, who prosecuted for the parish, said Dr. Seaton, the analyst, had found that many prescriptions were inaccurately dispensed, and this very much detracted from the value of the medicine. Mr. Meahy proved that he left a prescription at the defendant's shop, which was for a mixture containing 60 grains of the sulphate of quinine in water, a tablespoonful to be taken twice a day. The analyst certified that only 13 grains of sulphate of quinine were contained in the bottle of medicine. The defendant said his son told Mr. Meahy that he could not guarantee the quantity of the drug, as his weights were away to be verified. Mr. Meahy said something equivalent to this was said after it was said that the medicine was for analysis. The defendant said he was not in the habit of dispensing other doctors' prescriptions. It was usual to charge at the rate of a penny a grain for quinine, and in a practice of sixteen years he never had occasion to put anything like 60 grains in one bottle of medicine. It was notorious that dispensers were in the habit of curtailing the doses prescribed by physicians every day in the week, and that if they did not so curtail then hundreds of people would be poisoned. (Laughter.) He did not think there was any law compelling a dispenser to dispense any quantity of a drug given in a prescription. In fact they were told by the Pharmaceutical Society to use their own discretion if they noticed that a drug was ordered in excessive doses. Mr. d'Eyncourt said it stood to reason that it would be foolish to make up fatal doses of any drug. The chemist would see that a mistake had been made. Did the defendant say this prescription would be fatal or injurious? The defendant said quinine was usually prescribed in grain doses, and the prescription pointed to excessive doses. It was not exactly dangerous, but more than a shilling (the price paid by Mr. Meahy) must have been charged had 60 grains been used. Nothing of the kind had occurred before. Mr. Pemberton said he could not let this statement pass unchallenged. Other medicines had been found not to accord with the prescriptions. He thought it more a case of carelessness than for any possible gain. Mr. d'Eyncourt said it was all-important that prescriptions should be accurately made up, and fined the defendant 40s. and costs. Defendant asked if he could appeal. Mr. d'Eyncourt: No. It is a question of fact and not of law.

[The name of Ernest Farndon does not appear on the Medical Register for 1886.]

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

ANYTHING TO ATTRACT!—In the window of a chemist in this town are seven bottles strung up to the top of the window, each bottle containing a snake, from the deadly "cobra" to the "carpet" snake.

Mr. F. HARRIS ALCOCK has left Messrs. Southall Brothers & Barclay, by whom he was employed as their analytical chemist. It is hoped, for the sake of the Chemists' Association and the classes, that he may find it to his advantage to remain in this town.

Mr. CHARLES THOMPSON, pharmaceutical chemist, 159 Stratford Road, Sparkbrook, has issued a circular informing the public of an important alteration in the conduct of his business, by which his customers will receive the full advantage of the "cash system of trading" now in vogue in several parts of the town.

BOURNEMOUTH.

LOW PRICES.—The chemists of this district announce that they have decided to supply patent medicines, proprietary articles, and natural mineral waters at reduced prices for cash.

CHESTER.

PRESENTATION TO DR. WATERS.—Last Saturday Dr. Waters was presented with his portrait, painted by Mr. Frank Holl, R.A., and a cheque for 296l. 3s., as the outcome of a subscription inaugurated at a public meeting held in the same place on November 3 last year, and in recognition of his merits as a citizen and his services to the medical profession. We have previously reported that Dr. Waters was the recipient of a gold medal from the British Medical Association for his services in the cause of medical reform. In November last the chemists of Chester congratulated Dr. Waters on this recognition of his services, and Dr. Waters in replying wrote in high terms of his regard for the drug trade. At the meeting on Saturday Dr. Waters, in returning thanks for the testimonial, and acknowledging his indebtedness to the medical profession, added that he could not “pass over another class closely connected with them without whose skilled and watchful aid the best efforts of the medical man would be in vain. He alluded to the educated dispensing chemists of Chester, than whom no locality can boast better qualified men. Though he valued and was grateful for the good-will of all, he naturally attached exceptional importance to the favourable opinion which his professional brethren and the chemists of Chester had so unanimously accorded him.”

EDINBURGH.

MEDICAL COMPETITION.—While it is asserted that one medical man is closely identified with one of the cutting establishments here, it is rumoured that several others, either impelled by a desire to share in the “big profits” earned by chemists, or by the more laudable motive of supplying *pure drugs* and *accurately dispensed* prescriptions to their patients, thus saving the latter from the risk of being poisoned by the *druggists’* unqualified assistants, are either dispensing their own prescriptions or going to do so. This rumour has taken shape in at least one instance, a shop having been opened at 102 Pleasance by John Taylor, M.D. (Edinburgh), where, among a few of the accessories of a drug business, the now rather common card, bearing the legend “Prescriptions dispensed at greatly reduced charges,” may be seen displayed in the window.

LIVERPOOL AND DISTRICT.

PAINFUL ACCIDENT AT RUNCORN.—A fitter named Richard Williams is undergoing treatment at the Liverpool Eye Institution on account of serious injuries received to his eyes on March 10, at the works of the Runcorn Soap and Alkali Company. Williams was following his employment at the new ammonia plant, when a quantity of gas used in the manufacture exploded. The man was seriously injured, and it is feared that he will partially lose his sight.

EXPLOSION IN A VETERINARY SURGERY.—Shortly after nine o'clock on Monday morning an alarming explosion of chemicals occurred at the surgery of Messrs. Elam & Jackson, veterinary surgeons, Lowhill. The assistant was engaged in making a prescription, when some chemicals underneath the counter exploded with terrific effect. All the windows were blown out, and even the glass in neighbouring houses was broken, while the assistant was seriously injured, and may lose his eyesight. The fire in the surgery was put out in a singular manner, several hand grenades, which happened to be placed near the door, having exploded by the shock, and thus mechanically effected the extinction of the flames.

KNOCKING A MAN INTO A VAT OF ACID.—At Warrington, on March 11, a middle-aged man named John Bolan was charged with assaulting and beating Peter Hector, a man about the same age, by knocking him into a vat of acid. The acid was used for cleaning wire, and was not very strong, so the complainant had not been seriously burnt, but he had been rendered unable to work for some time. It was stated that the defendant had previously knocked another man into a vat of acid, and another into a tub of water. The defendant asserted that the complainant fell into the vat without any force being used by him. He called Constable Ford, who stated that the complainant had informed him that he did not think the defendant intended to knock him into the vat.

Mr. White (magistrate) said the result of the assault was more serious than was intended, and he ordered the defendant to pay 30s. to the complainant and all the costs, altogether 3l. 2s.

MALLING

THE SALE OF MUSTARD.—At the Malling (Kent) Petty Sessions on Monday Mr. George William Howard, of Aylesford, was summoned for selling adulterated mustard, in contravention of the Food and Drugs Act. The purchase of two ounces of mustard at the defendant's shop was proved, *2d.* being charged for it. The certificate of Dr. Adam, the county analyst, stated that the sample contained 23 per cent. wheaten flour. Mr. W. S. Norton, who defended, cross-examined witness, who knew that mustard was generally sold as a compound, and that the defendant, in his presence, said he sold the mustard just as he received it from Messrs. Colman. Mr. W. S. Norton contended that there could be no conviction, as the witness had not made a demand within the meaning of the Act, which required that no person should sell an article of food to the prejudice of the purchaser. Now, in this case, if pure mustard had been sold, it would have been to his prejudice, as mustard would not keep unless mixed with another substance. The defendant was called, and said he sold the mustard just as he received it, and he had sent the sample left with him to Messrs. Colman. When he sold the mustard he showed the constable the label on the tin, which stated that it was a mixture. The summons was dismissed on defendant paying the costs.

STAFFORD.

SUICIDE BY CYANIDE OF POTASSIUM.—The South Staffordshire coroner resumed the inquiry on the 15th inst. respecting the death of Sarah Painter, a domestic servant, who had been found poisoned. Medical evidence showed that the deceased had been poisoned by cyanide of potassium, and that she was enceinte. The police stated that no information could be obtained where the poison was purchased. The jury returned a verdict of suicide, and directed the police to make further inquiries respecting the poison.

SHEFFIELD.

MR. JERVIS, Broomhill, is very seriously ill.

MR. J. M. FURNESS evidently intends keeping abreast of his “cutting” neighbours. He has got both his establishments on the telephone exchange.

TELEPHONIC.—The number of medical men and chemists on the telephone exchange is gradually gaining, and the company to whom it belongs seem to be realising the importance of cultivating the custom of the allied professions, their latest move in this direction being the opening of the exchange on Sunday and at night. This constant attendance must prove of great value to medical men, although it may become another “thorn in the flesh” to chemists’ assistants on night or Sunday duty.

MICROSCOPIC.—Mr. G. T. W. Newsholme has added to his other departments one for the sale of microscopic materials, and has issued a list of reagents and apparatus used in microscopical research. Although Sheffield is the residence of one of the most distinguished of modern microscopists (the Rev. Dr. Dallinger), and claims as its own Dr. Sorby, whose classic researches on the microscopic structure of rocks and steel are well known all the world over, it has not shown the same interest in the pursuit of “minute” knowledge that has been shown by other manufacturing centres, such as Manchester and Birmingham. Any attempt, therefore, to fan into flame the spark which already exists must be welcome.

A “CUTTER” CUT.—Out West a druggist sold St. Jacobs Oil at 40 cents a bottle, and his neighbour, incensed at this outrage, took down his price to 25 cents (less than it could be bought at). Druggist No. 1 sent all the little boys in the place to No. 2's shop, and laid in a big stock at the low figure, and waits the collapse of No. 2 in order to do a roaring trade.

Pharmaceutical Society of Great Britain.

NORTH BRITISH BRANCH.

AN evening meeting was held in the branch premises at 36 York Place, Edinburgh, on Wednesday, at half-past eight o'clock. Mr. H. Bellyse Baildon, F.R.S.E., chairman of the Scottish executive, presided, and there was a large attendance, from town and country. The assistant-secretary having read the minutes of the last meeting, the chairman called upon Mr. William Gilmour to read a note on

A THEORY OF EMULSIFICATION.

In this the author endeavoured to give a satisfactory reply to the query, Why should emulsions be stirred always in one direction? The inquiry had been suggested to him by a well-known Edinburgh professor, whose theory was that by always stirring in one direction—for example, in the case of an oil emulsion, or in making cold cream—the oil is broken up in volume, minute globules resulting; but when the direction of stirring is reversed the oil tends to return to its original state. The author had made various experiments, and found that, although a difference in the size of the globules was observable when examined by the microscope, little difference was apparent by the naked eye, and the two emulsions were, from a practical point of view, identical. It was noticed, however, that by stirring in two directions a little longer time was required to finish the emulsion, and this was the case with several oils when operated on with different emulsifying agents. On the whole, he considered that not much importance is to be attached to the theory of stirring one way, but it is advisable not to reverse the direction towards the end of the process, because at that point the tendency to spoil seems to be well marked.

In the discussion on the paper Mr. J. Nesbit supported Mr. Gilmour's statements, and the chairman gave it as his opinion that the subject was worthy of further investigation.

Mr. Gilmour contributed another note, entitled

PRACTICAL REMARKS ON PILL-COATING.

He confined his remarks to the difficulties and side issues of the subject. After referring to the growing popularity of coated pills, and humorously remarking that they are getting almost as important as patents, he proceeded to say that pearl-coating was directly opposed to the theory of Pharmacopœia pills. The Pharmacopœia implied that pills should be made of such a consistency that they would be readily soluble when swallowed, and it was desirable that they should be kept in a soft as opposed to a hard condition. If pills are to be successfully coated they must be hard and dry, and these conditions are those which it is difficult to obtain for the pharmacopœial pills; in short, they cannot be conscientiously made if they are to be satisfactorily coated. Next referring to the coating itself, he showed that the aim should be to make it as thin as practicable, and in this connection he mentioned that the thickness of the coating of several classes of pills which are found in the market is noteworthy. He had examined some, 30 per cent. of the weight of which was coating. Chemists should therefore be careful not to buy coated pills by weight. They should also examine the coating or the chalk of which it was composed, for much of the chalk of commerce is contaminated with arsenic, and should be washed with hydrochloric acid and water before being used. Pills for coating should be of such a nature that they may not become pitted in keeping. One factor in the production of pitting, he said, was the operation of rounding the pills. If this be done with much friction, the pill softens with the amount of heat which is developed; and, moreover, this friction appears to change the nature of the pill altogether, so that it remains permanently softer than it would be were it not subjected to the heat of friction. He was opposed to pearl-coating; and, in conclusion, called attention to, and showed specimens of, the saccharin-coated pills, prepared according to a process for which Mr. W. L. Howie has applied for a patent.

An interesting discussion followed this practical communication. Mr. W. Ainslie, senior, pinned his faith to tolu coating, in which he was supported by Mr. Nesbit and the chairman, the latter also stating that he knew of two cases

in which saccharin had produced vomiting, and this possibly might be considered in the case of coating pills with saccharin. He objected entirely to pearl-coating, because it made pills all alike, and so gave rise to mistakes. Dr. Inglis Clark remarked that he had examined some gelatine-coated Bland's pills, which were quite red in the centre, and, referring to this, Mr. Peter Boa stated that Bland's pills did not require to be coated if sugar was one of the components. This kept them well, and the pills had no taste.

The next paper was a

NOTE ON LIME-WATER.

By J. INNES FRASER.

The writer had examined eighteen samples of lime-water procured in Edinburgh. Nine of these were up to the Pharmacopœia strength, one, indeed, containing over six grains in the half-pint. From observation he thought that there was no difficulty in maintaining the standard, if the water were carefully prepared and kept in a cool place. These observations were corroborated by Messrs. Maben and Nesbit in the course of a short discussion. Dr. Clark pointed out that one of the samples contained exactly the same amount of lime as the Edinburgh water supplied to the public.

Mr. J. H. Fisher (Dunfermline) followed with a

NOTE ON THE CORROSION OF A ZINC REFRIGERATOR BY AMMONIUM CHLORIDE AND POTASSIUM NITRATE.

This was an interesting communication arising from a little study of an ice-cream refrigerator. This was coated with zinc; and potassium nitrate and ammonium chloride were used to make the freezing mixture, water being added to it in order to make a solution. It was observed that the zinc surface corroded, and on investigation it was found the metallic zinc dissolves in the solution of the above-named salts. As a corollary, in certain cases of ice-cream poisoning the symptoms developed were observed to be similar to those of zinc poisoning, and the inference was that there was some connection between this poisoning and the chemical reaction. It was probable that the reaction took place between the metallic zinc and chloride of ammonium with the formation of zinc chloride and ammonia gas. The solution would therefore contain potassium nitrate, zinc chloride, and ammonium hydrate, and this leaking into the inner vessel would contaminate the ice-cream. He cautioned the machine-makers against the dangers of the use of the freezing mixtures which they recommended, and pointed out that in the case of zinc-coated iron, and even zinc alone containing other metals as impurities, the presence of two metals may give rise to electrical action, and this may explain why machines in which only salt and ice are used frequently corrode.

In the discussion which followed the reading of this paper Mr. J. I. Fraser stated that he knew of a case in which a zinc percolator with copper bindings disintegrated when used with water only. Mr. Nesbit considered it dangerous to use zinc vessels for pharmaceutical purposes. Mr. Shand pointed out that he had separated zinc electrolytically from a double salt, the zinc being in combination with ammonium oxalate. Messrs. Clark, Dott, Gilmour, and Maben also joined in the discussion, and supported generally the conclusions which Mr. Fisher had arrived at. Mr. Fred. Stephenson then read a

NOTE ON SYRUP OF TOLU.

The writer referred to and contrasted, in the first instance, the formulas of the British and U.S. Pharmacopœias and the Codex. In the British the tolu balsam is directed to be boiled for half an hour with the water, in a lightly-covered vessel. The U.S.P. directs the balsam to be digested with the water in a covered vessel for two hours at a temperature not exceeding 180° F., while the Codex orders double digestion—the first for two hours—in a water-bath. He considered all these processes to be defective, because heat drives off the volatile principles of tolu. He had tried the concentrated liquors, in the preparation of which some alkali, such as magnesia, is used. But these liquors are also unsatisfactory, probably because of the absorption of the odorous principle by the magnesia. With the object of securing the full flavour of the tolu he considered that cold maceration with the balsam in fine division was the thing to aim at. The method

he used was to powder the tolu and mix it with the sugar, then he placed this in a percolator and added the water, the rest of the sugar being dissolved in the percolate. A sample of this was passed round, and its fine flavour was much admired by the members.

Dr. Inglis Clark threw out the suggestion that the tolu and water should be heated together, with an inverted condenser to prevent the escape of odorous principles. He had observed that the flavour of some samples of syrup of tolu changed as the syrup became old. This was due to the decomposition of cinnamic acid into benzoic acid, and probably the subsequent change of that into some body similar to benzol, for the old syrup smelt strongly of benzol.

Messrs. Boa, Fraser, and Nesbit also joined in the discussion.

The last paper read was on

THE PRESENCE OF MANGANESE IN CHLORINATED LIME. By ALEXANDER SHAND.

The writer found that all the samples of chlorinated lime obtainable through ordinary sources contained manganese. On boiling the samples with water they became of a pink colour, due evidently to the oxidation of the manganese and the formation of potassium permanganate. He considered that the manganese got into the lime by being carried over with the chlorine from the chlorine stills, and in this, as well as in other points, he was corroborated by Messrs. Dott and Baker, who spoke on the subject.

This concluded the reading of the papers. It is a most satisfactory sign of the vitality of the branch that so soon after its reconstitution so much energy should be shown in these meetings. After the reading of the papers,

The ASSISTANT-SECRETARY described various specimens which were placed on the table. These included donations from Messrs. T. Christy & Co., a fine specimen of cinchona from Messrs. T. and H. Smith & Co., and a specimen of caleche from Bolivia. This substance contains sodium iodate, and is one of the sources of iodine. Amongst curiosities shown were a refuse cake of opium covered with a curious fungus, probably *mucor* or *pilobolus*, and a squill bulb which has been in the museum of the branch for twenty years, kept in a glass-stoppered jar, and which recently sprouted—probably, as a wit remarked, in jubilation at the settlement of the recent difficulties of the branch.

The chairman then intimated that the next meeting would be held on April 13, when a paper on "Pill-coating" would be read by Mr. Thomas Thompson, who would exhibit his gelatine-coating machine, as described in the "Art of Pharmacy."

LONDON CHEMISTS' ASSISTANTS' ASSOCIATION.

ANNUAL DINNER.

THE annual dinner of this Association was held in the Royal Venetian Chamber of the Holborn Restaurant, on Wednesday night, Mr. Michael Carteighe, President of the Pharmaceutical Society, being chairman. The company numbered fully 200, and included Drs. Curnow, and Macnaughton Jones; Messrs. Bottle, Greenish, Ince, Naylor, Spink, Tanner, and other well-known pharmacists.

After dinner, which was served in first-class style, the Chairman proposed "The Queen." He was followed by Mr. T. S. Dymond, who, in an effective speech, proposed "The Medical Profession." In replying, Professor J. Curnow delivered a humorous speech, which greatly tickled the company. After reciprocating the warm terms in which Mr. Dymond had referred to the medical profession, he said that it was his belief that medical men and chemists should always be intimately connected. He had arrived at this belief through experience. It used to be the case that certain members of the medical profession insisted upon doing the work of the chemist, and he was one of those who had had the misfortune to commence work in that school. He had been apprenticed to a country doctor, with whom he was part groom, part chemist, and part errand-boy. (Laughter.) That was his first experience in pharmacy, and some one who had watched him dispensing had remarked that he

seemed able to put drugs into bottles, but he could not wrap them up properly. (Laughter.) But he had not sufficient confidence in himself to fall in with that opinion, for when he got two 3-oz. bottles to fill, one for "the collyrium," and the other for a black draught, he put the medicines in the wrong bottles. Then he was very apt, on a fine summer's afternoon, to give the groom 6d. to mix the pil. rhei co. and to do other jobs not so pleasant as cricket. (Laughter.) Such was his first experience of pharmacy, and he gathered from it that it was very wrong for a certain number of doctors to insist upon their students learning pharmacy—it could not be properly learnt. (Hear, hear.) His second experience was of a different nature. When he was walking the hospitals there was amongst his fellow-students a negro who was less remarkable for his medical knowledge than for his acquaintance with the classics. His negro friend was a grand Latin scholar—at least he thought so. (Laughter.) Well, one night he had been called to see a female patient who was suffering great pain, and as he did not quite know what to do he thought he had better consult some classical record, such as "Pereira," and there he found this prescription, which he, however, wrote in *very* abbreviated style:—

Hydrargyri submuriatis	..	..	drachmam unam
Pulveris opii	..	..	.. scrupulum unum
Camphoræ	..	..	.. grana duodecim

Misce fiant pilulæ viginti; quarum æger capit tres quaque quartâ horâ donec ptialismus supervenerit.

This was taken to the chemist, roughly turned out of his bed at 3 A.M., and whether he was half asleep or was not so brilliant a Latin scholar as the prescriber was not stated, but the word "ptialismus" appeared to be too much for him, and ultimately he translated it "purgation." (Laughter.) The results might be guessed, but fortunately the services of the resident accoucheur were required before the dose could be often repeated. The most curious thing about the case was that, when a conference was held about the matter and the negro brought to task, all he said in excuse for himself was that he had copied the prescription from an authority, and the only suggestion he could offer was to exclude the least important drug. (Laughter.) Ever since that incident he (the speaker) had had an abhorrence of Latin directions—at any rate, if the directions were written in English patients could read them, and that generally satisfied their curiosity.

The next toast, "The Pharmaceutical Society and Chairman," was proposed by Mr. Taylor. The Chairman, responding, showed how pharmacy had improved since the society was founded, and that this improvement was due to the society. He referred at considerable length to the various legislative measures which have been promoted by the society, and pointed out that a part of the drug trade, in opposing the society so bitterly, labour under a total misapprehension of its aims and work. He pointed to the magnanimous action of the society in making its benevolent fund open to all chemists, and in undertaking the registration without fee of all chemists who were in business before 1868, as an indication that the society had the good of the trade at heart, and in return he claimed on the part of the trade greater respect and more interest in the society's work. Reference was also made to the new Pharmacy Bill.

The next toast was "The Chemists' Assistants' Association," proposed by the Chairman and responded to by Mr. H. H. Millhouse, the President. In his reply Mr. Millhouse stated that the Association is now in a more satisfactory state than it has ever been before. This year it has thirty-four patrons, being seven more than last year. The papers which had been read were of great merit, and he was glad to say that the attendance had exactly doubled this session, forty-two being the average. Much of this success was due to the work of the honorary secretaries. He acknowledged the assistance of Mr. Dymond, honorary secretary to the dinner committee.

The toast of "The Visitors" was proposed by Mr. Winfrey, who claimed for assistants at least one seat at the Pharmaceutical Council table. Mr. H. Bowring Spink responded. During the evening there was some excellent music; the songs by Mr. Reginald Croome and Mr. A. E. Wilson being received with special favour.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

A CAUTION TO PUBLIC ANALYSTS.—M. L. Padré, in a recent communication to the Paris Chemical Society, called attention to a dangerous impurity, probably accidental, which he detected in white filtering-paper. He found in it a considerable percentage of sulphate of lime. A specimen collected from the whole quire afforded a little over 10 per cent. of ashes consisting mainly of lime sulphate. Four filters, 9 centimetres in diameter, taken from different parts of the quire, gave on simple washing with distilled water 0.114 gramme of the sulphate, which he calculates corresponds to about $7\frac{1}{2}$ per cent. of the weight of the paper. M. Padré thought it his duty to put chemists on their guard, as the unsuspected impurity would be exceedingly dangerous in some cases, notably in public analyses of wines, when *plastering* is one of the adulterations to be looked for.

EMOLUMENTS OF PROFESSORS IN COLLEGES OF PHARMACY.—In accordance with the provisions of the new Budget, voted on February 27, the salaries of the professors in the Superior Schools of Pharmacy will henceforth be as follows: For Paris, 1st class, 11,000f.; 2nd class, 9,000f.; for Nancy and Montpellier, 1st class, 8,500f.; 2nd class, 7,500f.; 3rd class, 6,500f. If it be borne in mind that the professors' time of lecturing is generally one session of about twenty-two weeks every year, and that they are entitled to various extra compensations, such as examination fees, diploma fees, &c., it will be seen that their life is not one of hardships. In Faculties of Medicine the emoluments for professors of the first class are 15,000f., and the others in proportion. Formerly the salaries of professors in the Paris College of Pharmacy were 8,000f. and 10,000f.

TO REMOVE COPPER FROM EXTRACTS.—Solid extracts it is well known, often contain copper derived from the utensils employed in their preparation. M. Coudures, in the "Bulletin de la Société de Pharmacie de Bordeaux," recommends the following simple method for removing the contamination. When, on testing the extract with a clean steel blade, the characteristic copper stain has shown the presence of the impurity, the whole extract should be redissolved in a sufficiency of distilled water. Next a solution of hyposulphite of soda is to be added, drop by drop, with continual agitation. From time to time a small portion of the extract is filtered off, and tested for copper. When the point has been reached at which all the copper is eliminated, the whole extract may be filtered and evaporated again in a porcelain dish to the proper consistency. Another way is to take a known quantity of the extract, to ascertain with it how much hyposulphite is exactly needed, and to add it at once to the whole extract together.

MUNICIPAL PHARMACIES.—Some time since M. Hovelacque, a former president of the Paris Municipal Council, offered a resolution that municipal pharmacies be established to supply cheap medicaments to the poor. M. Hovelacque, it is unnecessary to say, is one of the shining lights of Socialism. His proposition was referred to a committee, whose chairman, M. Strauss, last Thursday reported against the project for budgetary reasons, and because with such a precedent municipal bakeries, butcher shops, &c., would next come in order. M. Joffrin, another Socialist, supported the proposition because, he said, pharmacists sometimes charge scandalous prices, often ruinous to families in straitened circumstances. It might be objected that a public pharmaceutical service would interfere with private interests, but the public water service has ruined the business of the water-carriers, and railways that of the mail-coaches. Councillor Deschamps thought a preferable plan would be to contract with a number of established pharmacists to supply on low terms medicines to families duly recommended by the dispensary physicians. Finally, a vote being taken, the committee's conclusions were adopted, and the establishment of municipal pharmacies was indefinitely postponed.

Gazette.

PARTNERSHIPS DISSOLVED.

FOREMAN & FOWLE, High Street, Putney, oil and colour merchants.

LAWSON, TEMPLE & Co., Alpha Works, Millwall, and Fish Street Hill, City, white lead, paint, colour, and varnish manufacturers, oil merchants, &c.

STEPHENSON, J. & M., Morpeth, mineral-water manufacturers.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDER.

MARLOR, MARY JANE (trading as J. Marlör), Lees, Ashton-under-Lyne, chemist and druggist.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

BONTOFT, WALTER SEYMOUR, Spalding, veterinary surgeon. March 29, County Court, Peterborough; March 29, County Court, Peterborough.

HOLMES, LIONEL GEORGE PEYTON, Shirehampton, Gloucestershire, medical practitioner. March 19, Official Receiver's offices, Bristol; March 18, Guildhall, Bristol.

SEMPLE, CHARLES EDWARD ARMAND, Goldhawk Road, Shepherd's Bush, and Torrington Square, doctor of medicine. March 23, 33 Carey Street, Lincoln's Inn; March 19, 34 Lincoln's Inn Fields.

ADJUDICATIONS.

BONTOFT, WALTER SEYMOUR, Spalding, veterinary surgeon.

CLARKE, FRANCIS CLISBY, Mark Lane, City, and Nettleton Road, New Cross, colour manufacturer, trading with William Hawley, jun.

CLOUING, JOHN REVETT, Thetford, surgeon and apothecary.

EBERSBERG, COUNT HENRY VON LEESNER, Cannon Street, manufacturing chemist.

HOLMES, LIONEL JOHN PEYTON, Shirehampton, Gloucestershire, medical practitioner.

RIDLEY, CHARLES HENRY, Maidstone, chemist and druggist.

ORDER MADE ON APPLICATION FOR DISCHARGE.

TURNER, JOSEPH, Hawarden, Flintshire, manufacturing chemist. Discharge suspended for two calendar months.

BANKRUPTCY REPORTS.

E. L. W. BRIDGEWATER, West Bromwich, Chemist and Druggist.

ON the 16th inst., at the Oldbury County Court, before his Honour Judge Griffiths, Mr. F. W. Topham applied for an order of discharge on behalf of Edmund Lambut White Bridgewater, chemist and druggist, of Hill Top, West Bromwich. Mr. Sharp (Official Receiver) presented a report, showing that the bankrupt had given acceptances to a Mr. Clarkson, and had not kept a record of the transactions. He stated goods were supplied in each case, but Mr. Clarkson was only scheduled as a creditor for 40%, whereas claims amounting to 133*l.* 18*s.* 11*d.* had been made in respect of those Bills. He submitted, therefore, that the books did not sufficiently disclose the business transactions and financial position within the three years immediately preceding his bankruptcy. In 1880 the bankrupt owed his principal creditors 69*l.*, and gave them a bill of sale for 119*l.*, a further advance of 50*l.* being made. He stated that creditors were pressing him, and if it had not been for this assistance he must have suspended payment. The bankrupt, therefore, had traded with a knowledge of insolvency. About twenty years ago the debtor assigned his estate to a trustee, but was unable to give any information as to the dividend paid. Mr. Topham said the bankrupt's creditors were in sympathy with him, and were ready to trust him again. The Judge remarked that the bankrupt had traded with a knowledge of his insolvency, and that being an offence under the Act, he felt bound to suspend the order for six months.

The affairs of Mr. SULTZBERGER, late of Cannon Street, E.C., Opium Merchant.

In the Queen's Bench Division of the High Court of Justice on Tuesday, before Justices Mathew and Cave, this

bankrupt appealed against a decision of the Croydon County Court judge, absolutely refusing him his discharge. Mr. Winslow, Q.C., supported the appeal, and Mr. Lushington was for the respondent.

Mr. Winslow, Q.C., in opening the case, said the bankrupt, a German, had for many years been engaged in the opium trade, his course of procedure being to purchase opium, and, having manufactured it, send it to Chili and other places where the Chinese, who indulged in the drug, congregated. He failed in March last, with gross liabilities of 7,402*l.*, of which 4,052*l.* was unsecured, while the assets were estimated at 187*l.* 5*s.* 8*d.* Mr. Sultzberger formerly traded in partnership with Mr. Mahler, at Liverpool, but he then moved to London. In 1881 he, in conjunction with Messrs. Okell & Owen, brokers, of Liverpool, made a very large purchase of opium, Messrs. Okell & Co. finding the 5,000*l.* necessary for the undertaking. Similar heavy purchases had been made in previous years, and had resulted in large profits, and it was not unnaturally expected that a similar satisfactory issue would result from the 1881 purchases. Unfortunately, after the purchase was made two things occurred. The first was that a war broke out between Chili and Peru, and the second was that there was an unusually heavy crop of opium in Turkey; and these two things together so reduced the market rates that, instead of a large profit, a heavy loss was made, and hence the failure, for Mr. Sultzberger had incurred a liability of 2,599*l.* to Messrs. Okell & Owen. The Official Receiver, when the debtor applied to the Court below for his discharge, presented a report alleging a number of offences under the Act. In the first case he reported that though excellent books were kept until November, 1884, yet as no entries had since been made, and as a payment of 211*l.* to Messrs. Okell & Owen did not appear in them, and as no balance-sheet or statement of affairs had been presented, the debtor had brought himself within the Act by not keeping such books as sufficiently disclosed his financial position and business transactions during the three years immediately preceding the bankruptcy. In the second place it was submitted that the bankrupt had, after knowing himself to be insolvent in 1881, contracted debts without any reasonable expectation of being able to pay them; next, that he had indulged in rash and hazardous speculation in regard to the opium transactions; then, that he had been guilty of unjustifiable extravagance in living; and, finally, that on a previous occasion he had made a composition with his creditors, and paid them 6*s.* 6*d.* in the pound.

Mr. Lushington intimated that in the Court below the Official Receiver withdrew his allegation as to the failure to keep proper books, and that was not relied on.

Mr. Winslow said he had a complete reply to that charge, for the books were kept so long as the bankrupt remained in business, while the item which it was alleged had not been entered did, in fact, appear in the books. Coming next to the charge of continuing to trade with a knowledge of insolvency, the learned counsel explained that all the bankrupt did after 1881 was to manufacture the opium then in hand for the purpose of selling it at the best rates possible; and it was the most advantageous course to adopt, because he had a lot of valuable machinery in his possession adapted for the manufacture. Undoubtedly it was necessary from time to time to purchase small additional quantities of opium, but the sellers were well aware of the bankrupt's position when they were dealing with him. The bulk of the debts incurred after 1881 were due to friends who had helped to maintain Mr. Sultzberger and his family, and had been well aware they could hope for no repayment unless his affairs took a more favorable turn. As to the charge of rash and hazardous speculation, he submitted that the opium transaction was not in the nature of a rash and hazardous speculation; prior investments of a similar character had resulted in large profits, and the outbreak of war between Chili and Peru, or the growth of an excessive crop in Turkey, could not have been foreseen. Coming next to the allegation of unjustifiable extravagance in living, Mr. Winslow said the report was based on a mistake, for since 1881, when the losses were incurred, the annual expenditure had been reduced to the lowest possible point. Finally, he could not deny that the debtor had before compounded with his creditors, but he submitted that the judge below had imposed an excessive penalty, and that a nominal suspension would meet the justice of the case.

Mr. Lushington said the Official Receiver had no desire to vindictively press the case against the bankrupt. It was his duty to lay the facts which came under his cognisance before the Court. He had done so in this case, and it was for the bankrupt to have explained away the charges.

The Court, in reversing the decision of the Court below, expressed a belief that had the County Court judge had before him the material they now had to deal with, a very different view would have been taken of the Official Receiver's report. Quite another complexion had been put on the case, and the charges of rash and hazardous speculation, of unjustifiable extravagance in living, and of trading with a knowledge of insolvency had been satisfactorily explained away. The bankrupt would be granted his discharge forthwith.

Trade Notes.

MESSRS. CARR, GIBBS & SON, of Bournemouth, having heard of a recent trade note in this journal concerning the "real Riga Kräuter Balsam," send us a sample of the "Echter Rigaer Kräuter Balsam," for which they are the agents. There seem to be two "genuine" articles about.

CARTER'S NON-ALCOHOLIC CHAMPAGNE. — We have examined the champagnes made by Messrs. Carter & Co., Wilder Street, Bristol, which they have introduced in order to meet the growing demand for superior table waters. The champagnes are of various flavours—such as lime-juice, orange, and ginger—and are put up in champagne pints, which are attractively labelled. All the beverages may be classed among the sparkling rather than the vigorously effervescing class, and their froth is not over copious, nor too persistent. Upon these qualities and the aromas of the champagnes their popularity will greatly depend, and we feel that, wherever they are introduced, they will be popular. The ginger champagne is of exceptionally rich aroma. The natural flavour of fresh Jamaica ginger, as well as the full warmth of its pungency, are retained in a high degree, and make this beverage suitable for either winter or summer.

DEATHS.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

CARTWRIGHT.—On March 3, at Ironmarket, Newcastle-under-Lyme, Mr. William Cartwright, J.P., pharmaceutical chemist. Aged 67.

DAVIES.—On February 14, Mr. David Davies, chemist and druggist, Coleford, Gloucestershire. Aged 33.

HOGG.—On February 25, Mr. Thomas Hogg, pharmaceutical chemist, Bideford. Aged 67.

JACKSON.—On February 27, Mr. Walter Jackson, pharmaceutical chemist, Foxberry Road, Brockley, S.E. Aged 24.

KNOWLES.—On February 16, Mr. John Knowles, chemist and druggist, Seymour Street, Euston Square, N.W. Aged 54.

MACHON.—On March 10, at Linden House, Charnwood Street, Mary Ann, beloved wife of Edward Machon, chemist, Derby.

PIERSON.—On February 11, Mr. Clement Pierson, chemist and druggist, Brunswick Place, Leeds. Aged 51.

SPYER.—On February 21, Mr. William Godfrey Spyer, chemist and druggist, Watlington, Oxon. Aged 83.

YOUNG.—On March 10, Mr. James Young, 26 Chorley New Road, Little Bolton, chemist and druggist. Mr. Young was the son of a corn merchant at Bolton, and served an apprenticeship with Mr. Thomas Moscrop, of that town. Afterwards he became an assistant with Messrs. Woolley, Sons & Co., of Manchester, and eventually commenced business on his own account in Folds Road, Little Bolton. After being there for many years he relinquished his shop about five years ago, and has since carried on a large business as a drysalter and manufacturer of boiler composition in another portion of Folds Road. Mr. Young was elected to the Town Council in 1885. His death was occasioned by an attack of acute bronchitis. He was in his 54th year.

Practical Notes and Formulae.

FERRI QUININÆ CIT., FERRI AMMON. CIT., and similar articles are not generally home-made. Even some of the wholesale houses are giving up their production, as it is becoming a special line of one or two large manufacturers. The reason for this is that the operation of scaling is one of considerable nicety of manipulation, requiring specially-constructed hot rooms, where waste heat, if possible, may be utilised. The object aimed at is to dry the scales quickly, so as to ensure their permanent transparency, also in the case of alkaloids to minimise liability to change in the amorphous condition. In practice the syrupy solution is brushed on the glass plates, no other method giving a product of the desired thinness.

But as we have said, we do not think that the retail pharmacist is likely, without special experience, to succeed in this branch of the pharmaceutic art, but one suggestion may be made: Why not, if the reader has a taste for making such things, and uses a fair quantity in mixtures, &c., prepare the two articles named in the form of solutions without scaling them? They must be tolerably concentrated to keep well. To prevent mould a little chloroform may be added, which acts as a good preservative.

A MIXTURE containing syrup of wild cherry and spirit of nitrous ether, amongst other ingredients, was observed by Mr. T. S. Wiegand to become much darker in colour. He was induced to experiment upon the matter, with the result that the darkening was attributable to the colouring matter of the wild-cherry bark and the constituents of the spirit of nitrous ether.

SUBSTITUTE FOR Fehling's Solution.—The ordinary solutions deteriorate on keeping, and are liable to throw down the suboxide of copper themselves if they have not been freshly prepared. Professor Holland, of Jefferson Medical College, recommends the following test fluid, which is very efficient, is easily prepared, and is not spoiled by keeping:—

Cupric sulphate	3j.
Glycerine	fl. ʒj.

Five drops of this solution are added to a drachm of liquor potasse, in a test-tube. Boil a few moments to test the purity of the fluid; should it remain clear it is ready for use, and when boiled with urine containing much sugar gives a red precipitate, or an olive-green one with small quantities.

PROTOCHLORIDE OF IRON PILLS.

The following formula for these pills is recommended by Mr. A. Simon in the *Union Pharmaceutique*:—

Protochloride of iron	5 grms.
Powdered sugar	1 "
" althaea	1 "
" tragacanth	0.20
Simple syrup	q.s.

F. s. a. 50 pil.

The pills after rolling are coated with tinctured ether (1 in 3), then in powdered sugar while still moist, and dried. The excess of sugar is then removed and a fresh coating of tolu given.

PIERRE'S EAU DENTIFRICE.

DR. PIERRE'S MOUTH-WATER, a preparation much esteemed on the Continent, is prepared as follows:—

Star anise (recently bruised)	200 grams
Powdered cochineal	2 "

Macerate (or percolate) with 1,500 grams of rectified spirit, press and filter. Make up the filtrate to 1,500 gr. by the addition of spirit and dissolve in it—

Ol. anisi stell.	50 grams
Ol. mentha pip.	15 "
Heliotropine	0.6 gram

Ph. W. v. Ned.

ANTISEPTIC COLLODION.

A WRITER in a foreign journal, commenting on the proneness of various hypodermic solutions to cause irritation, states

that much of this is due to the presence of micro-organisms in the solutions, in the syringe-needles, and upon the skin. For the preservation of the solutions he recommends that a little carbolic oil (5 p. c.) be placed on the surface, which effectually excludes germs. The same oil may be used for the syringe. For the skin he recommends the use of an antiseptic collodion, viz.:—

Collodion flexile	10.00
Hydriarg. perchlor.	0.01

M. s. a.

A patch of this about the size of half-a-crown should be painted upon the skin, the needle being inserted in the middle of the patch. This effectually prevents the entrance of germs, and it may also be used for making the finger-nails aseptic during operations.

ASSORTED ANTISEPTICS.

It is stated that a good trade is done in Germany in small tin cases of antiseptics, which retail at about 1s. 6d. each. These contain small bottles of iodoform, carbolic acid, and antiseptic collodion, as well as a piece of sublimated gauze. No doubt the cases would have a ready sale in this country, if made attractive and brought under the notice of medical men.

TO BLACKEN BRASS.

ACCORDING to the *Scientific American* brass may be blackened as follows:—Make a strong solution of nitrate of silver in one dish, and of nitrate of copper in another. Mix the two together, and plunge the brass in it. Now heat the brass evenly until the required degree of dead blackness is obtained.

TO MAKE A CHEAP INVOICE WRAPPER.

A QUIRE of double-crown white wrapping-paper is 20 inches by 15 inches. Double each folded sheet into six, then open out the paper and draw a line of gum, made rather strong, half an inch above and half an inch below each fold; allow to dry, and then separate the pieces. You will in this way have made 288 wrappers 10 × 5 at the cost of a fraction above sixpence.

SYRUPUS SCILLÆ COMPOSITUS.

THIS syrup is much used in the United States, and is said to be a very effective preparation for cough, especially when associated with bronchitis. A writer in the *American Journal of Pharmacy* recommends the following improved formula for it:—

Aceti scillæ	0j.
Antimonii et potassii tartrat.	gr. xxiv.
Extracti senega fluidi	fl. ʒij.
Syrupi simplicis, q.s. ad	fl. ʒxxiv.

Evaporate the vinegar of squill to the consistency of a soft extract to remove the acetic acid; then add 18 fl. oz. of simple syrup, and apply heat. When clear, add the tartar emetic, and stir until dissolved; then take off the fire, and add sufficient syrup to make the whole measure 22 fl. oz.; lastly, when cold, add the fluid extract of senega.

LEATHER-GREASE.

	Parts.
Yellow wax	25
Oil of turpentine	25
Castor-oil	25

Melt together, and add—

Linseed-oil	250
Wood-tar	7

Mix thoroughly.

The leather to which the grease is to be applied must first be thoroughly cleaned from superfluous grease or other matter, by steeping in water for some time, then rubbing with a coarse cloth, and drying. When nearly dry, rub well with the grease near a fire. The greasing should be repeated two or three times with old leather, shoes, boots, &c. If the process is repeated occasionally—say, every six months—the leather will last a very long time, and remain very soft and flexible. The grease forms no crusts and fills the pores completely.

Scientific Notes :

On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

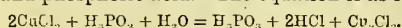
TO DETECT SPERMACEIN IN OIL OF ROSE.—Hoppe recommends the following (D. Am. Ap. Ztg.):—The suspected oil is agitated with from one and one-half to twice its weight of melted glacial acetic acid, the resulting crystalline mass transferred to a filter, and washed with vinegar to remove the oil, then with water until the odour of rose has quite disappeared, and finally washed with solution of soda, and again with water. Should any residue result, its identity with spermaceti is evidenced by the odour produced, similar to burning oil when charred, and may be reproduced after some time by again heating the substance.

DISTRIBUTION OF NITRIFYING ORGANISMS IN THE SOIL.—In a paper recently contributed to the Chemical Society, Mr. R. Warrington, F.R.S., shows as the result of sixty-nine experiments with clay or loamy soil from various depths that the nitrifying agent is present almost without exception down to 3 feet from the surface; samples of soil from below this depth did not always exhibit the power of causing nitrification, and none of the samples of soil taken 8 feet from the surface produced nitrification. The nitrifying organism present in the subsoil is apparently in a feeble condition, nitrification starting much later in solutions seeded with subsoil than in those seeded with surface soil. Mr. Warrington adduced reasons for believing that in agriculture, nitrification is practically confined to the surface soil. The nitrogenous matter present in the subsoil is, however, nitrifiable if exposed to favourable conditions.

ADULTERATION OF SAFFRON.—R. Kayser, of Nuremberg, received for inspection a sample of whole saffron of apparently good quality, although extremely dark in colour. Submitted to the ordinary tests, the specimen was found to be free of tar dye, and microscopical inspection failed to reveal any adulteration. By analysing the ashes, however, an admixture of no less than 14 per cent. of sulphate of baryta was discovered. The adulteration had been effected by first bathing the saffron in chloride of barium and afterwards in sulphate of potash.

FABIANA IMBRICATA.—Mr. Carl Ochsenius, Marburg, (*Arch. der Pharm.*) gives particulars concerning the new Chilean drug *Fabiana imbricata*, which has recently been introduced into Europe and the United States. The plant yielding the drug is a woody shrub, flourishing in the dry mountain regions of the Chilean Republic, especially in the central and southern provinces. The plant belongs to the Tamarisks, and, during the flowering period, has the appearance of an Erica. It does not generally attain over 3½ feet in height, but in some cases—for instance, in the neighbourhood of Elqui, in Coquimbo—it has been found to grow 14 feet high. The wood is much used for manufacturing small articles, such as spoons. In Chili the leaves and twigs of the shrub have long been employed in distoma hepaticum zeder, a liver disease to which cattle grazing on moist meadows are greatly subject. For the same disease the leaves of the *Boldoa fragrans*, Gay, are frequently administered. These leaves are much esteemed in Chili as a remedy for syphilis, hydrophobia, &c., and have recently been recommended by Chilean doctors for affections of the human liver.

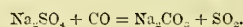
PREPARATION OF CUPROUS CHLORIDE.—Cuprous chloride can be conveniently prepared by heating a mixture of copper sulphate (4 grams) and sodium hypophosphite (2 grams) in about 50 cc. of water to which 30 drops of fuming hydrochloric acid are added. The cuprous chloride is deposited, and can be purified in the ordinary way. The change can be explained thus: Copper hypophosphite is at first formed, and this is converted by the hydrochloric acid into cuprous chloride and phosphoric acid. The equation is as follows:—



(A. Cavazzi) *Journ. Chem. Soc.*

MANUFACTURE OF CARBONATE OF SODA.—The alkali industry is most fruitful of new processes, and the result

of this is that every issue of the *Patents Journal* contains numerous applications for patents for improvements and new processes. Amongst these a few months ago was one by A. Kayser, A. B. Young, and J. Williams, of Buffalo, New York, for the manufacture of sodium carbonate direct from the sulphate by passing a mixture of carbonic acid and carbonic oxide over the latter, maintained at a certain high temperature. In the reaction which was alleged to ensue, sulphur dioxide was expelled, carbon dioxide taking its place, and forming sodium carbonate. The sulphur dioxide it was proposed to pass into Hargreaves' cylinders, charged with salt, and thus form sodium sulphate, again completing the cycle of operations. Struck with the brilliancy of this idea, Messrs. Watson Smith and W. B. Hart have experimented with the process on the laboratory scale, taking every precaution to ensure accuracy, and their results have been communicated to the Society of Chemical Industry. It was stated by the patentees that the carbon dioxide took no part in the reaction, but that its presence in the same volume proportion as the carbon monoxide was necessary as a diluent and to prevent the formation of sodium sulphide. The reaction which would, or ought to, occur may therefore be represented by the following equation:—



Messrs. Smith and Hart obtained not the remotest semblance of this reaction. At a dull red heat there was no change, but at a bright red heat the sulphate was reduced to sulphite and sulphide, the carbon monoxide being changed into dioxide. But this reaction only took place in presence of moisture, and in the absence of carbon dioxide; when these conditions were reversed no reduction whatever took place, let alone carbonisation of the alkaline base. Obviously, therefore, the process is entirely impracticable.

VOLUMETRIC ESTIMATION OF NITROUS ACID.—In the *Journ. Soc. Chem. Industry* (Dec., 1886), Messrs. A. G. Green and F. Evershed propose a modification of their process for the estimation of nitrous acid by means of aniline. Comparison is also instituted between the results obtained by this process and the permanganate process of Kinnicutt and Nef, which shows that the aniline process is equally accurate, and has not the disadvantage of acting upon other oxidisable substances.

The normal aniline solution contains 93 grms. of pure aniline (freed from water by redistillation), and about 450 cc. of hydrochloric acid in 1 litre. Of this solution, 25 cc. is placed in a small stoppered bottle, together with a little ice. The solution of the nitrite (about normal) is run in from a burette, with continual agitation. From time to time a drop is taken from the bottle and mixed on a white slab or dish with a drop of a solution of potassium iodide and starch. The immediate production of a blue colour indicates the presence of nitrous acid. When this point is reached, the bottle, with stopper replaced, is left to stand, surrounded with ice. If after some minutes another testing shows that the nitrous acid has been taken up, another drop is added from the burette, and so on, until there is an excess after the solution has stood for an hour. In testing with the starch solution, account must only be taken of the colour which is produced at once, as, on standing, the drop almost always becomes coloured, even when no excess of nitrous acid is present. By the quantity of the nitric solution used, omitting the last drop, its value in HNO_2 or NaNO_2 is indicated.

TRACES OF HYDROCYANIC ACID may be detected in the following manner:—The liquid supposed to contain the acid is treated with a few drops of potassium nitrate solution, from 2 to 4 drops of ferrous sulphate solution, and so much dilute sulphuric acid, until the yellow-brown colour of the basic ferric salt formed is just changed into a light yellow. The liquid is then heated to boiling, and afterwards allowed to cool. The iron in excess is precipitated with a few drops of ammonia, filtered, and the filtrate tested with one or two drops of dilute colourless ammonium sulphide. If hydrocyanic acid was present in the original solution, the liquid at once assumes a violet colour, which changes in a few minutes into blue, then green, and finally into yellow. Very minute traces of hydrocyanic acid produce a bluish-green colour, which soon changes into greenish-yellow. 0.000032 grms. hydrocyanic acid in 10 cc. of water can be thus detected.

Medical Cleanings.

AN ANTI-NEURALGIC SPECIFIC.

AN American physician says that the following prescription has never failed in his hands to cure the cases of pure neuralgia occurring in his practice:—

Tinct. cinchonæ comp.	3ij.
Tinct. nucis vom.	3ss.
Morphine sulph.	grs. ij.

Of this one teaspoonful is to be taken every three hours.

It is stated that the desired result is obtained after one or two doses, and that it is permanent. As each dose of the preparation contains a tenth of a grain of sulphate of morphia, it is obvious that many doses cannot be given without producing the narcotic effects of that drug.

ACID PHOSPHATES IN SKIN ERUPTIONS.

MR. JAMES STARTIN, writing to the *Medical Press*, states that he has had good results from the administration of Horsford's Acid Phosphates in drachm doses to patients who were suffering from eczema and other irritable skin affections.

SODIUM BICARBONATE IN GONORRHOEA.

DR. CASTELLAN, a French army surgeon, struck with the fact that the specific bacillus of gonorrhœa can only live in an acid medium, and that the discharge is generally acid in reaction, has, according to the *Medical Press*, tried the effects of alkaline injections. The results obtained are reported by him to have been excellent. He begins by testing the reaction of the discharge, and then, if acid, injects a small quantity of a one-per-cent. solution of bicarbonate of sodium—the least irritating of the alkaline salts—repeating the injection several times daily. Under this treatment the scalding accompanying micturition is at once alleviated, and in the course of a week a very marked diminution is brought about of the discharge. Convalescence was generally rapid, and the final result very satisfactory.

IODOFORM PENCILS.

DR. OSCAR V. PETERSEN, of St. Petersburg, recommends, in the treatment of syphilis, pencils made of 50 or 70 per cent. of iodoform, together with glycerine and gum arabic, and enclosed in a wooden holder. In the case of a chancre ulcer, the pencil need only be applied to its surface, which then becomes coated with a more or less thick layer of iodoform. The chief advantage of the method is that the patient remains absolutely free from an unpleasant and tell-tale odour.—*Brit. Med. Journ.*

BREVITIES.

OXALIC ACID has a strong sedative action on the heart, and when administered in poisonous doses produces cardiac paralysis, which accompanies death. In small doses, 2 to 5 grains largely diluted, it has been used by a French physician in the treatment of asthma and bronchitic dyspnoea. It is stated to give prompt relief from the oppressing symptoms, and is not followed by any bad effects.

OL. PINI SYLVESTRIS appears to have a rather bad effect upon the kidneys when administered to some patients. Mr. A. M. Hynes mentions two cases (*Brit. Med. Journ.*) of elderly men who suffered from chronic bronchitis and were ordered five drops of the oil every three hours as an emulsion. Two or three days of this treatment brought on severe pain in the renal region, followed by strangury and painful micturition with bloody urine. The symptoms disappeared when the remedy was stopped.

NITRATE OF POTASH, according to Dr. A. J. Sinclair, of Edinburgh, is added in small quantity to milk in order to counteract the flavour of turnips which is conveyed to the milk from the food of the cows. Dr. Sinclair believes that this addition is the cause of infantile diarrhœa, for he has had several cases which he could not cure until fresh milk was changed for condensed milk.

SALOL IN SCIATICA.—Dr. V. Asehenbach, of Corfu, reports in the *Fortschritt der Med.* that, suffering from sciatica, for

which all known remedies had been tried in vain, he at last resolved to try salol. In the evening he took a dose of half a gramme, and at midnight one gramme, after which he fell asleep, and remained perfectly free from pain.

INFANTILE CONSTIPATION.

A VERY successful remedy for this is podophyllin, in small doses; iridin may be combined with it with good effect. Make a tincture of the following:—

Podophylli resin	gr. viij.
Iridin	gr. v.
Spt. ammon. arom.	3j.

Digest for several days, and filter.

From one to two drops of this may be given at bedtime on a small piece of loaf sugar, or the dose may be combined in mixture along with syrup of orange. This is the dose for a child of one year and under.

SUMMER DIARRHŒA.

WE have frequently given formulae for the treatment of summer diarrhœa on the antiseptic principle, and it is therefore interesting to record results which have followed that treatment. Dr. Emmet Holt has published the results of 300 cases treated by the old method, bismuth and Dover's powder being the specific used; 52 per cent. of the cases were cured, 27 per cent. improved, 18 per cent. were no better, and 7 per cent. died. There were only 81 cases under the antiseptic treatment (salicylate of soda), but of these 84 per cent. were cured, and 7 per cent. improved, while only 1 died, and 7 per cent. were unimproved.

PICRATE OF AMMONIA IN MALARIAL DISEASES.

DR. H. MARTYN CLARK, of the Amritsar Medical Mission, Punjab, has treated no fewer than 10,000 cases of malarial diseases with picrate of ammonia, and in half the cases he has kept a record. In nine cases out of 5,000 did the picrate fail, and in these quinine cured at once. The usual dose is from $\frac{1}{8}$ grain to $1\frac{1}{2}$ grain four or five times a day in pill. Half a grain is a fair average dose. Thus given the result is soon visible. In the great majority of the cases treated, $\frac{1}{2}$ -grain doses in the interval prevented the recurrence of the next attack of the fever, while in about 20 per cent. of the patients two or three attacks followed before the fever ceased. In only one case of quartan ague, despite large doses of the salt, the fever recurred for six periods, gradually diminishing in intensity, and then yielded to it. It is equally successful in all the forms of ague, but it is a curious fact that the cases in which it failed to cure were all of the tertian variety. Dr. Clark has also employed this agent in the treatment of twenty-five cases of malarial neuralgia of various nerves, six cases of malarial headache, and one of malarial colic. In all these instances it cured completely and speedily. In addition to being cheaper and given in smaller doses, picrate of ammonia does not produce the unpleasant effects that quinine does, such as headache, deafness, tinnitus, &c.; nor does it, like quinine, disorder the digestion or cause nausea, as quinine does in India.

EUCALYPTOL IN PHTHISIS.

BOUVERET has employed hypodermic injections of eucalyptol in the treatment of phthisis. The daily dose of the antiseptic has varied from $1\frac{1}{2}$ gramme to $2\frac{1}{2}$ grammes. The duration of the treatment has been from fourteen to sixteen days. Sixteen cases of phthisis were treated by this method; six of the number had fever, and the remaining ten were without fever. There was rarely any local disturbance at the site of injection. It was certain that the antiseptic was absorbed; it could be detected in the breath, but not in the urine. Albuminuria was not observed as the result of the treatment. It is very doubtful whether the number of bacilli was altered in any way by the method of treatment. Sweating, as a rule, was diminished. Its chief effect is as a balsamic preparation on the bronchial secretion, which it influences favourably. MM. Perret and Chabbannes have made experiments with the 5-per-cent. solution of eucalyptol, injecting a mixture of it with tuberculous matter under the skin of guinea-pigs. The general conclusion at which they have arrived is to the effect that the antiseptic is utterly insufficient to prevent the activity of the micro-organism that causes artificial tuberculosis.—*Lancet*.

Veterinary Pharmacy.

SPLINTS.

THESE are bony growths upon the leg between the knee and fetlock joint, or in the hind leg between the hock and fetlock. In order to understand the nature of a splint, the arrangement of the bones must be studied.

The large number of bones which constitute the leg reduce concussion to a minimum, as well as give grace and convenience to the animal in all sorts of attitudes. The knee consists of two rows of small bones, with a projecting bone behind and between the knee and fetlock, as between the hock and fetlock joint of the hind limb. There are three bones: the large bone, which can be seen and felt, extends the whole distance; but there are two smaller ones, called "splint" or "splent bones," attached to the side and back of the long bone—called the "shank" or "cannon" bone. These bones do not articulate in the ordinary way, but are attached to the side rear of the cannon bone by a cartilaginous union. It is supposed that they ascend and descend to a slight degree when the knee is flexed, and its laterally placed bones have a bearing upon them, as may be seen by their articulating facets. This may be so in the young horse, but in an old one the union generally appears to be of a bony nature, and may well have given rise to the name of splint bones, as they look as if placed on each side of the large bone to give it support.

A great many young horses, when first put to work, become lame from inflammation between or upon these bones. The cause is concussion; the result, a production of bone upon the surface by the periosteum, or bone-producing membrane, which we attempted to describe when treating of ring-bone. In the early stage the lameness is acute. It does not generally show itself on first starting out from the stable—a characteristic of foot lameness—but when the animal has got a little way on a journey, after a certain amount of friction has been produced. The remedy is rest. It is almost always a defect of youth—as, indeed, are the bulk of lamenesses—and, however much veterinary surgeons may preach on the impropriety of using horses too young, the question of *l. s. d.* must necessarily overrule the objection. It may be taken as a truism that 99 horses out of 100 are put to work too soon; and it may be safely added that not 10 per cent. of them ever repay the breeder.

As in the case of ring-bone, when not hereditary, so it is in splint. The structures which served the unbroken colt well enough are not found capable of concussion upon hard roads with a metal shoe, and a bony deposit called a "splint" is the result.

If the case is brought for treatment in the incipient or formative stage, the growth may generally be prevented. First foment with hot water containing 1 oz. to each pint of the following lotion:—

Tinct. opii	..	..	..	..	3j.
Ext. ergotæ liq.	..	..	..	..	3j.
Glycerini	..	..	..	..	3ss.
Aq. ad	..	..	..	..	Qj.

M. Ft. lotion.

The object of this lotion will be apparent. The application of opium will ease the pain, and, by evaporation, reduce the temperature. The glycerine softens the skin, and also alleviates pain by giving elasticity to the swelling. As regards the use of ergot externally, we have no collegiate authority, but experience has shown us that its action locally is much the same as constitutionally—*i.e.*, by acting on the vaso motor nerves it diminishes the calibre of the arteries, and thereby reduces the amount of blood sent to the part. If the animal is allowed to rest, the equilibrium of the circulation is restored, and the deposit of bone will be prevented or its increase arrested by the above treatment. A dose of aloes—4 to 6 drachms—after twenty-four hours of feeding on bran mashes will be an assistance.

It may not at a glance be apparent in what manner a purgative can affect a lameness, but it is a well-known observation by the most ignorant of stablemen, and may be explained by the fact that nausea is produced by aloes, and nausea lowers the temperature and the heart's action, in

which, of necessity, the inflamed parts must participate. A physic ball has been the means of selling many a chronic cripple to the unwary, for the effect of aloes upon horses, lame in the feet more especially, must be seen to be realised.

At least 80 per cent. of all the adult horses at work have splints, and nearly all of them have been lame at some time during their formation, so that a horse with a splint is not necessarily an unserviceable animal. Much depends upon the situation of it. If it is high up it may interfere with the knee, and be a cause of permanent lameness; and if very far backward it may involve the tendons playing over the part, and either cause lameness by its rough surface or interfere with the motion of the leg by bending down the tendons, which, in the proper condition, should play freely over them.

Enough, then, has been said of splint to show that it is often a cause of lameness, either of a temporary or permanent nature. We have spoken of the treatment in the incipient stage, but we will now suppose a horse is brought to the pharmacy for advice upon an old splint: perhaps a more than usually severe strain has been put upon the animal—such as lending him to a friend, or making him earn a truss of hay by letting him out for an occasion—and the splint that has lain dormant for a long time has taken on inflammation and produced lameness. Here we should advise a few days' rest, and a dose of aloes, followed by a blister of biniodide of mercury ointment 1 drachm to the ounce. If, on careful manipulation of the splint, it is found to have spiculae or needlelike points, it will be best to "fire" him—a horrible process savouring of the barbarous ages, but supported by centuries of experience and observation. As the process may not be familiar to some of our readers we will briefly describe it.

Firstly, the horse must be secured. In cases of splint and other firing operations of no very great duration it is not always necessary to cast the horse by hobbles or ropes, but it is sufficient to secure him with a twitch (a piece of cord attached to a stick and wound tightly round the upper lip).

The parts to be operated upon are to be closely clipped, and the iron made red-hot in a fire conveniently near at hand. The heated iron is to be then drawn across the splint at intervals of about five-eighths of an inch. Three to six lines for an ordinary splint will be sufficient, and the skin must be penetrated sufficiently, or it is useless cruelty to subject the animal to the process. If blood oozes out the firing has been rather too deep, as there should be no subcutaneous vessels divided, and without that the part will not bleed. Firing is often effectual when repeated blisters have failed, but it should not be attempted by anyone who has not seen it performed previously, and then only when necessity absolutely demands it. Horses may be put under the influence of chloroform while the operation is performed, and a very little experience will enable the operator to do this with confidence. The respiration should be watched by the heaving of the flank, and if it appears to be subsiding altogether the chloroform must be removed. The easiest method of administering chloroform when the horse is upon the ground is to fill a sponge, and squeeze it out gently; then introduce into the nostril—which should be previously greased to prevent scalding—and let the horse inspire through it, while closing the opposite nostril, and breathe out through the other. Nearly all the pain can be safely avoided in this way.

A run at a grass or a good long rest in a loose-box afterwards will, in the great majority of cases, restore the horse to soundness, and justify the owner in having resorted to such severe means to effect a cure.

DRUGS AND DRINK.—It is impossible to run a legitimate drug store business in Kansas, says a correspondent of the *National Druggist*. A good old deacon goes into a drug store and asks for a box of pills. He gets them and then leans over the counter and whispers, "I'd like a pint of whisky with them." "I am sorry, but I can't give it to you; I don't do that kind of business." "Well, then," is the reply, "take your pills; I will go to some drug store that does," and off he goes. A druggist can't be honest, if he wants to. While I was canvassing the state I went into a drug store in a town where I was not known. "I would like to get a whisky barrel in which to pack some sauer-kraut. Have you got one?" I asked. "Oh, yes," was the reply; "we have lots of whisky barrels."

PHARMACEUTICAL LEGISLATION.

SIR,—How is it you have been so remiss lately that you have given us no information relating to the new Pharmacy Act?

The Bill has been read three times, and assented to, and yet you have told us nothing about it. However, it will be better late than never for your readers, and so I enclose you a copy of the Act in extenso. You will not find it at the Queen's printers yet.

Yours truly,
GEORGE TANNER HOUGH.

Iford Road, Manor Park, E.

THE PHARMACY ACT, 1887.

An Act to amend the law relating to Poisons, and for the better protection of Chemists and Druggists, and for other purposes.

WHEREAS Pharmaceutical Bloomsbury Square is the only reliable authority upon matters of high moment affecting the body politic, the human body, and Pharmacists as a body:

Whereas in the opinion of the said Authority it is essential to the safety of the public that the number of chemists and druggists should be strictly limited, and that the irreducible minimum should be protected by law as hereinafter provided:

Whereas the Pharmacy Acts of 1852 and 1868 have made inadequate provision for the above purposes:

And whereas the said authority has graciously communicated to Parliament its approval of the following enactments:

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. The Council of the Pharmaceutical Society of Great Britain is hereby authorised and empowered to devise and adopt all such measures and methods as, in its wisdom, it may deem conducive to the purposes of this Act: and the publication of its decrees in the *Pharmaceutical Journal* shall, *ipso facto*, give them the force of law from the date of such publication; and all such decrees shall be read as supplemental hereto.

2. Every person wishing to trade as a Chemist and Druggist shall, on and after the 1st day of January, 1888, produce to the Registrar of the said Society a duly authenticated certificate of his birth, and shall make a statutory declaration in the form required by law, wherein he shall state (if the facts so be) that he is at least forty years of age, that he has spent not less than fifteen years in the open shop of some respectable pharmacist in England, and that he has paid a minimum fee of 200 guineas to such pharmacist for professional instruction in the arts of Pill-making and Powder-sifting.

3. Every such person on producing the said Certificate and making the said Declaration shall, upon payment of such fees as the Council of the said Society may in its discretion from time to time determine, be admitted for a term of five years to the School of the Society at Bloomsbury Square aforesaid, and shall *de die in diem* (Sundays only excepted) be instructed in the following subjects (*inter alia*):—

Astronomy: The weight, specific gravity, and chemical composition of the fixed stars; the salts of Neptune; the polarity of the Pole Star; the course of Mercury; the eruptions on the face of Venus; the fungus growth of the Nebulæ on the belt of Orion; the temperature of the fire of Vulcan; and the measurements of intra-molecular movements on the other side of the moon.

Navigation: The art of scientific tacking; the science of sailing near the wind; the specific gravity of life under the pressure of a cyclone: spirit measurements at sea; the chemistry of rum-and-water; the properties of Bloomsbury yarn; and the relative virtues of several Old Salts.

Chemistry: Researches upon the family relationships of molecules, the primitive constitution of atoms, the physiognomy of forces with a view to identification, the resolution of all things to some primordial great-grandmother of Nihilism, and the latest process for a gradual elimination of competitive Chemical Atoms from the Body Politic.

Botany: The common family of Trade plants; the "pluckings" at Bloomsbury; the "blowings" upon thirsty Assistants; the peculiarities of the Scotch Thistle; the Apple of Discord in the Square; and the vegetating curiosities of the Pharmaceutical Council Chamber.

Languages: The Dead and Double-Dutch.

Arithmetic: Awfully Vulgar Fractions.

And Pharmacy: A study of High Comedy with Stage effects.

4. No person shall be legally qualified to trade as a Chemist and Druggist, or as a Pharmaceutical Chemist, until he shall have spent the full term of five years in the specified Curriculum of Study, nor until he shall have passed a satisfactory examination in the various branches of learning herein prescribed.

5. The Examiners shall be trading pharmacists only.

6. For the protection of the aforesaid Irreducible Minimum, and for the safety of the public, be it further enacted as follows:—

(a) From and after the said 1st day of January, 1888, no Doctor of Medicine, Surgeon, Apothecary, or other duly qualified Medical Practitioner shall keep open shop for the sale of any drugs, chemicals, or medicinal preparations, nor shall he dispense, vend, or expose or keep for sale any drug or medicament whatsoever. For every breach hereof he shall be liable on conviction to a penalty of not less than £100, nor more than £200; the prosecution for every such offence shall be at the instance of the said Pharmaceutical Council; and the fines imposed shall be applied to the general purposes of the said Society.

(b) Co operative Associations shall, for the purposes of this Act, be taken and deemed to be medical men with bodies that may be kicked, and souls that may be — saved.

(c) All drugs, chemicals, and medicinal preparations found, after the said 1st day of January, 1888, in or upon the shops or dwellings of Herbalists and Grocers may be summarily seized by officers of the said Society, duly authorised by the said Council, and the same shall thereupon become the property of the said Society, Provided always that Brimstone and Treacle shall not be deemed a medicinal preparation within the meaning of this Act.

(d) Patent Medicines are abolished, inasmuch as they are preparations which injuriously affect the Nervous System of the aforesaid Irreducible Minimum, and thereby jeopardise the safety of the public. No Proprietary Medicine shall henceforth be sold or kept or exposed for sale, unless the same shall have been compounded and prepared, bottled, corked, labelled, and priced by a Chemist and Druggist or by a Pharmaceutical Chemist; and such parts of the Act 44 Geo. III., cap. 98, as relate to the sale of Patent or Proprietary Medicines, and the whole of 52 Geo. III., c. 150, relating to the same matter, are hereby repealed.

(e) Wholesale and Manufacturing Chemists are abolished. Provided nevertheless that it shall be competent to the Council of the said Society to establish a New Order under the style and title of "Chemists W. and M., per C., S.-D., C.-C., et E.," which honorary appendix shall mean "Wholesale and Manufacturing, per Certificate, Statutory Declaration, Compulsory-Curriculum, and Examination," as hereinafter provided.

(f) Mineral Water Manufacturers and Florists and Seedsmen are abolished, and their businesses respectively, being potentially poisonous to the public, are added to that of the Chemist and Druggist to be carried on exclusively by him.

And whereas it has been found that, notwithstanding the existence and enforcement of Pharmacy Acts for regulating the sale of poisons, old women and vagrants throughout the country do condemn the spirit of the said Acts by gathering powerful poisons from fields, hedges, and waysides, and therefrom concocting the most deadly mixtures, to the great hurt and detriment of divers subjects of the realm, be it further enacted

7. That all old women and vagrants (other than those who may lawfully qualify under the provisions of this Act) who may be reasonably supposed to possess an intimate knowledge of the deadly poisons that grow promiscuously on the countryside may be summarily arrested upon the Warrant of the Curator, 17 Bloomsbury Square, aforesaid, and detained by him in his Chamber of Medical Curiosities during the pleasure of the said Council of the Pharmaceutical Society of Great Britain.

8. The Pharmacy Acts of 1852 and 1868, in so far as they are inconsistent with the provisions of this Act, are hereby repealed.

9. This Act may be cited for all purposes as "The Logic of Events Pharmacy Act, 1887."

Transcribed by GEORGE TANNER HOUGH.

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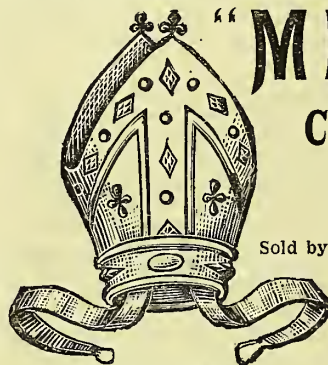
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EDITORIAL NOTES.

DISPENSING FOR MEDICAL MEN.

THERE was some basis of truth in the statement made by our
 correspondent *Justitia* last week, that chemists have now
 only two main sources of income left to them, namely,
 "dispensing" and "quacking." Patent medicines and
 sundries he regards as hopelessly gone; auxiliary trades we
 presume do not tempt him; and, assuming as we suppose he
 does, that chemists, as chemists, must live, he arrives at the
 melancholy conclusion already indicated. Melancholy, be-
 cause if these are really the only alternatives, quackery is
 well assured of a good many new recruits, and as these would
 be men already to some extent familiar with the more subtle
 delicacies of the art, the public danger is so much the greater.
 Our correspondent is evidently one who would prefer to get
 money by dispensing—if he can; and it may be he is one of

those people we sometimes read about who would rather not get it at all than get it by quackery. He naturally regards with a somewhat hungry eye the quantity of dispensing which passes through the incompetent hands of the doctor's wife or servant, and, conscious of his own ability to turn it out more safely and more attractively, he asks whether nothing can be done except "stand tamely by, watching the life-blood of our trade flow gradually away"? There are signs, he tells us, that the rising generation of medical men are dispensing their own medicines to a greater extent than their predecessors did. We do not know what the signs are to which our correspondent alludes, and we should have been inclined to think that the *proportion* of dispensing done by chemists has increased during the past twenty or thirty years. It is quite possible, however, that medical men dispose of more medicine too, for the total quantity of physic consumed is no doubt much larger per head of population than it was.

The remedy hinted at by *Justitia* is, as usual, a legislative one. He advocates such a law as is in force on the Continent, the principle of which is, that the same person shall not both prescribe and dispense. It would not be quite easy to explain why it is that all races, except Anglo-Saxons and savages, have thought it necessary to keep a legal check on the doctor. Certain it is that the opportunity which the medical man possesses of murdering his patient, if he should desire to do so, or of hushing up suspicion if he should kill him accidentally, are enormous. That even the first suggestion is not a ridiculous one is evidenced by the famous Palmer and Lamson cases; while, concerning the latter possibility, there can hardly be a doubt that deaths do occur from errors in the doctor's medicine, though explicit evidence is almost beyond the range of accessibility. It would be expecting an ultra human honesty to suppose that a medical man will ever certify a death to be due to "error in my dispensing," when, as our correspondent remarks, he can so easily attribute it to an unfavourable turn taken by the disease. That some day legislation in the direction desired by our correspondent will be attempted is very probable, but if he, or any other chemist, is resolved to go on living, and knows of only the two methods already described, we are bound to advise him to take to quackery, rather than wait for such assistance as Queen, Lords, and Commons are ever likely to furnish.

But the contention is so reasonable, and the advantages derivable from a separation of the duties of prescriber and dispenser are so obvious, that it is quite possible to anticipate that much might be done by mutual agreement. We have very little faith in associated action in such business as this, though it is conceivable that an association might assist the movement by an impersonal influence on both medical men and the public. But actual results are only likely to accrue to the man who vigorously and intelligently sets to work himself to check "the life blood" of his income. Such an one will first of all take care that his dispensing department will in all respects bear inspection; then he will by personal calls and judicious letters try to win this or that doctor to his plan. To do this he must of course be willing to work for a very moderate profit, and he must be willing to put himself to inconvenience for the convenience of the doctor. He must, in fact, make it worth the doctor's while to employ him, and if he once does obtain that doctor's confidence, he must take care not to sacrifice it by any comments on the doctor's treatment, any unauthorised repetition of his prescriptions, or any adoption of his formulæ for his own advantage. Such division of labour might be arranged to mutual satisfaction in many more cases than those in which it is now adopted; and it is by such personal methods that the millennium of pharmacy, dispensing confined exclusively to pharmacists, will be best brought about.

THE FRENCH DRUG TRADE IN 1886.

JUDGING from statistics recently published, 1886 has been a fairly prosperous year for the French drug and chemical trades. The imports of several staple articles of these classes into French territory show a considerable increase, and the exports also total up fairly satisfactorily, although the growth in this section is but modest in most cases. The quantity of medicinal roots, cinchona bark, quinine, and iodine imported has grown very largely, and unless the consumption of these articles has advanced in proportion as they became cheaper, there must now be a pretty large stock of these drugs in France. The imports of sarsaparilla during the years 1884, 1885, and 1886 amounted, roughly, to 88, 190, and 267 tons; those of jalap to 11, 12, and 34 tons; of liquorice to 969, 1,634, and 2,925 tons; and of various other roots to 758, 878, and 811 tons. The trade in cinchona bark is evidently drifting altogether towards London. In 1885 the movement in this article, as compared with the preceding year, underwent an enormous shrinkage as compared with 1884. Last year much of the loss was regained, the figures being:—Imports into France, 1,316,244 kilos., against 939,046 kilos. in 1885; exports from France, 370,679 kilos., against 322,666 kilos. in 1885. About two-thirds of the French supply is drawn from this country, while an equal proportion of the exports is shipped to London. New Granada has shipped a fair quantity to France, and the shipments from Peru have also advanced, perhaps because the cultivated Bolivian calisaya is becoming a factor of some importance in the cinchona market, or possibly because of an increase in the production of the Lima and Huanoco barks, which are so much in request on the Continent. The exports of bark from France to Germany are rapidly dwindling, from which we may, perhaps, infer that Hamburg now receives directly from South America much of the bark which formerly went to Havre.

Exports as well as imports of gums show a falling off, but the imports of bromine and iodine have largely increased, as indeed might have been expected from the cheapness and comparative steadiness in the price of these articles. In 1886 France received 38,097 kilos. of bromine, against 23,603 kilos. in 1885; and 17,246 kilos. iodine, against only 9,382 kilos. in 1885. The exports of iodine from France are given as 3,387 kilos. and 3,536 kilos. respectively. A good part of this, we may take it, is prepared from algæ on the Morbihan and Finisterre coasts. Potassium iodide is exported from the Republic in large and growing quantities (31,239 kilos. in 1886), and until a few years ago a considerable import trade, of which Great Britain had a fair share, also took place, but the latter has now been practically killed.

The quinine statistics are not favourable to the French manufacturers, who have exported 15,192 kilos. last year, against 17,175 in 1885, while, on the other hand, the imports of foreign quinine into France rose from 3,933 kilos. in 1885 to 6,227 kilos. last year.

In glycerine a very large export trade has been done last year. The imports of cutch, annatto, and coal-tar dyes show a large increase, and the export trade in dyewood extracts has more than regained its loss in 1885, which was a very bad year for this branch. The French cochineal trade has grown in volume, partly, no doubt, because the article has experienced a slight revival in price, but principally, we should think, because the growers evince an increasing dislike of London as a port of consignment, owing to our absurd landing charges, which of course press more heavily upon cochineal now than when it cost 7s. or 8s. per lb.

COTTON OIL COMBINATIONS.

THE American lard and soap manufacturers have declared war against the Cotton Oil Trust, a gigantic organisation which has hitherto exercised a control over the American cottonseed oil market similar to that wielded by the Standard Oil Company over the American petroleum interests. It is thought that not much less than one-half of the American cottonseed oil crop, which averages something like 18,000,000 gallons, is consumed by lard makers in the States, who use it as an ingredient in their manufacture. In what way the oil is made to acquire a sufficient consistency for this purpose is not explained, and the manipulation is probably kept a trade secret. Hitherto the lard manufacturers seem to have purchased their oil from the Cotton Oil Trust, virtually the sole owners of the commodity. Not content with their oil monopoly, the Cotton Oil Trust recently purchased two of the principal Chicago lard refineries, and thus entered the field as direct competitors of their own best customers. This proceeding has broken the camel's back. The lard people have risen in rebellion against the Oil Trust monopoly, and with the assistance of the leading American soapmakers, headed by J. S. Kirk & Co., of Chicago, they have formed an opposition association. The wirepuller of the new combination is a Mr. Philip D. Armour, of Chicago, said to be the largest manufacturer of lard and other "hog-products" in the world. This gentleman apparently glories in the fact that his own lard works consume not less than one-fifth of the whole American cottonseed oil output, and he is determined to fight the Oil Trust tooth and nail. He is now making a tour through the Southern and Western States for the purpose of establishing twelve gigantic cotton-oil mills, which are to crush seed for sale to the stockholders of the new company only. The capital stock of that concern, which will have its head quarters at Chicago, is to be about 2,100,000, and the erection of mills will be commenced immediately in Texas, Arkansas, Alabama, Mississippi, and other States. It is thought that the cottonseed trade will be powerfully stimulated by the new organisation, as planters expect in future to be able to obtain a better price for their seed than they could get from the Oil Trust. But it may well be doubted whether the substitution of one monopoly—for such the projected company, if successful, will no doubt become—for another can prove of lasting benefit to the producers.

From the outsider's point of view the squabbles between American speculators, however entertaining, are of much less interest than the revelation of the commercial practices of the combatants. It has hitherto been assumed by the public that the lard shipped from Chicago was one of the many "hog-products" which form the staple trade of that metropolis. The frank avowal of the largest lard manufacturer that his works alone consume some four million gallons of cottonseed oil annually throws a peculiar light upon the Chicago lard industry. Mr. Armour's statements have caused some inquisitive persons to make a further investigation of the uses to which the American cottonseed oil is put, and it then became clear that immense quantities are also employed in the manufacture of cheese. After this it is not surprising to hear that the exports of that commodity from America have shrunk from 148 millions in 1881 to 86 millions in 1886 showing that American "cheese" is fast losing its popularity abroad. Last year 6,574,000 gallons cottonseed oil were exported from the States, a large quantity going to Italy and the Levant, where it is used as an admixture of olive oil, the compound often finding its way back to America under the latter denomination. The Italian Government are about to endeavour to put a stop to the adulteration of olive oil, and perhaps this may bring about a reduction in the American

exports of cotton oil. But the latter article has evidently a future, notwithstanding this. Put up in fancy bottles, it is now largely sold by New York druggists under its proper name as a table oil and for culinary purposes, and it seems to become popular as such. There is no doubt that cottonseed oil has a considerable sale in this country as a salad oil, under fancy names, and it is also advantageously used as a hair oil.

OUR CORRESPONDENCE.

THIS journal has lately entered on the second year of its existence as a weekly publication, and, as we glance back over the year, certain developments become apparent to us which may not be so fully appreciated by our subscribers, who judge of the results as a whole. Few, however, can have failed to observe the remarkable increase in that part of our pages devoted to correspondence. Grievances, plots, and schemings have been systematically aired, reforms condemned and supported, and practical subjects discussed with such recurring vigour as to show that there yet remains in the drug trade a large surplus of energy for something else than paper warfare. We have not attempted to curb the energy of the combatants on either side on any question, and the result is that in some cases outsiders identify us with the winning side. Such is the logic of events.

But the most numerous and often the most voluminous of our correspondents are those who appeal to us and our subscribers for assistance in their multifarious difficulties. It is almost proverbial that the chemist is the man to go to in a difficulty, whether it be to identify a fossil or renovate an old garment. Nobody is so likely to tell a man what it is or how to do it as the chemist; and he, fortunately, is, as a rule, such a kindly disposed person that he will put himself to a world of trouble to solve a difficulty, irrespective of remuneration. This, to our thinking, is an indication that the chemist is a specially privileged person. As a tradesman he would not be appealed to on account of supposed ignorance; as a professional man he would not be appealed to on account of the fee. So he occupies the middle way, and is ever likely to do so. To this peculiar position we attribute, in a large measure, many of the queer questions which are addressed to us from all parts of the earth. The practical, prosaic outcome of this is weekly presented for the benefit of all readers, and is diligently supplemented by correspondents who seem to take a delight in giving others the benefit of their experience. But there is another element—the humour of it—which is reserved for ourselves. "Would you kindly," writes Ignoramus (the modest gentlemen are always "Ignoramus"), "inform me if there are phrenologists whose work is only to examine people's heads, saying what would best suit them. If so, state who, and their general fee, &c. Rather a 'rum' question, but still I have heard a good deal of talk about it." This correspondent has a lot to learn; of the existence, for example, of "James, Policeman thirty-two, . . . who some years ago assisted a phrenologist." Perhaps under his hands there might have been found bumps in "Ignoramus's" head which would entitle us to say—

Oh, surely, here are signs
Should soften your rigidity :
This gentleman combines
Politeness with timidity.

Two weeks ago a correspondent asked us what would be the result if he sold a shilling's worth of strychnine to a man who wished to commit suicide with it. This is a perfectly honest and straightforward inquiry. Should we smile or weep? There is the vision of the suicide's grave, and the condemned cell with a druggist in it, to get over. But we turn to some-

thing more light and airy. "Wanted, a rattling good recipe for growing moustache; and, if possible, the best plan of cultivating them." The possibility rests on the shadow of the embryonic hirsutory appendage, and the problem is, "Given a razor and a Welsh assistant, how to cultivate a moustache." Of problems there are many. One week it is to calculate the number of square centimetres in a square foot; and straightway another asks:—"A bought a keg of butter, for which he paid 50s. He sold 50 lbs. to B for 17., and 28 lbs. to C for 15s. How much has he over, and what did the butter originally weigh? I know that this is scarcely pharmaceutical, but I am interested to know. Stamp enclosed for a reply." This querist is still as interested as he is interesting, and, fortunately, rare. It is rather a curious fact that during the past year we have not received a single arithmetical query which would be considered difficult, yet everyone expressed his anxiety to have his difficulty solved. This is a short commentary on the reports of the College of Preceptors. A college of perception, we may remark, would be a useful institution to refer some correspondents to occasionally. Ambitious young men frequently address questions to us in regard to their chances of success in life, particularly if they come to London; all want to shine. It is rather odd, therefore, that we have to deal this week with a young man ("Bonus") who is not "anxious for to shine." He puts it thus: "What is the best stuff to take away shining from black clothes after being worn for a long time. It is caused by rubbing against the chairs, &c. The cloth is a very fine stuff." We do not wish to discourage legitimate inquiry, and would be glad even to assist "Bonus" in any efforts which would change him into an old-clothes man, or take the "shine" out of him; but, then, he has not yet asked his master how he renovated his black coat when it became seedy. We have another and select class of correspondents who address us as regularly as we send THE CHEMIST AND DRUGGIST to them, and it is wonderful how fertile their brains are, and how great their "conscience." If a reply to their queries does not appear the same week that they are addressed to us, in comes a sharp reminder of their existence. We must ask such correspondents to exercise a little patience—ours is very large. Occasionally they hit upon a subject which is of general interest, or considerable importance, and may require some experimentation or inquiry on our part before a proper answer can be given. It is but natural, therefore, that when "New Start" writes to us that he wishes to bring out "a new speciality, something striking and good, can you give me a formula?" he experiences a little delay before he gets a reply. We make no attempt to change this state of affairs. We could not, though we tried; all that we do is to ask our assailants to observe the rules under which we wrestle with them: Write each question on a separate piece of paper, write only on one side of the paper, write early in the week, and do not ask us to reply by post. We are willing and anxious to discuss all sorts of topics which have relation to the business of a chemist and druggist, or to pharmacy as an art, so long as we can thereby add to the interest of our paper; but we cannot undertake the heavy task of corresponding privately with subscribers on legal and pharmaceutical points which arise in their business, as some of them seem to expect.

Edison's Latest. Unless the Washington *Post* is one of the most subtle of comic papers it must have been sadly imposed upon. One of its reporters professes to have had an interview with the leviathan inventor Edison, and came away with an abundant budget of news. Edison is made to tell his interviewer that he has at last invented an apparatus which he calls a "nutricator." He takes so much

dirt and so much water, and with a little chemical apparatus and a few electric wires he can turn out any kind of food, meat, fruits, or vegetables required. As an example, he said to the reporter:—"Take a grain of wheat. Wheat is composed of a few simple gases and salts that last year were lying dormant in the earth, the air, and the water. It occurred to me that this process might be hastened; that instead of waiting a year for nature to collect those elements into an organic seed I could collect them in an hour, or perhaps a few minutes, and arrive at the same result by combining them organically. This I have done. I first find out what a particular kind of food is made of. There are sixty-five simple elements in nature; that is, substances which we call simple elements, because we have not yet succeeded in proving them to be compound. Carbon is the king of these. It is the great organiser. It is at the base of almost everything. It is the key to my discovery, for it possesses the peculiar capacity to form molecules from its own atoms. I form all my meat compounds by exposing three elements in a red hot state to nitrogen gas, though I use different flavours, which I get from the earth, too. I have had to bring from Westchester county some argillaceous soil not found here. I can make a wine, and have made it, with New Jersey earth and water, that no man can tell from Chateau Yquem. This great invention has not been 'hit on' before, because analytic chemistry has received too much attention, to the exclusion of synthetic chemistry; men have been more devoted to learning than to doing. Lavoisier was on the edge of it and missed. Sir Humphry Davy, Liebig, and Faraday were all in sight of it, and suddenly turned aside. They succeeded in making urea out of the elements and several other inorganic substances, but they stopped at that. They overlooked the simplicity of this thing. I think that after two or three years New Yorkers will no longer send to the tropics for fruits or to Europe for wines, because the head of the family, by turning a crank (or, perhaps, without turning a crank, if a clock apparatus is attached), can produce more delicious fruits and wines at a tenth of the cost." Edison went on to tell his interlocutor a good deal about isomorphism, allotropism, homologous groups, and atomicity, which evidently much impressed the latter. He declared, finally, that oranges and cabbages, pork and partridges, bananas and chocolate would all come out from his new machine, one as easily as the other—just changing the stop in a sort of musical box, we presume. Why does not this genius set himself for half an hour to the ridiculously simple task of producing artificial quinine?

* *

Who invented Saccharin? The discovery of saccharin is generally ascribed to Dr. Constantine Fahlberg, who patented it in Germany, and is about, it is said, to introduce it commercially from that country. But we read in the *Oil, Paint, and Drug Reporter* that Dr. Fahlberg's claim to the invention is disputed by no less an authority than Professor Ira Remsen, of the John Hopkins University, Baltimore. The latter gentleman claims that Fahlberg only carried out his directions; and would never have made saccharin if left to his (Fahlberg's) own resources. Fahlberg was an advanced student under Remsen at the Baltimore University, and both worked on the problem which brought forth the famous sweet substance. But Fahlberg hastened to take out a patent, and Professor Remsen is left out in the cold. Professor Remsen has now issued an announcement in which he states that saccharin cannot be made cheap enough at present to make it a successful rival of sugar; that sugar has not been made from coal tar; that the sulphinides belong to an entirely new class of compounds which are now under investigation in the laboratory of the Baltimore University; and that these substances have nothing in common with sugar except the sweet taste. Professor Remsen also points out that other sweet substances beside the sulphinides have been made from coal tar for many years without creating much stir, and concludes by saying that he cannot see any occasion for getting excited over the latest discovery of the kind. In the meantime the sugar interests in different countries are trying to put down saccharin by heavy duties, while it is said that the glucose manufacturers, who expect to reap large benefits from saccharin, are backing up the new sweetener as much as they can.

Ben Oil. The ben-nut order of plants (*Moringaceæ*) is remarkable for the small number of species which it contains. Bentley states that there are only four species, and that these are natives of Arabia and East India. Considerable interest has always attached to one species, *Moringa pterygosperma*, the horse-radish tree of tropical countries, the seeds of which yield by expression a fixed oil, which has always been reputed to be valued by perfumers and watchmakers; by the former on account of its power to retain odours, and by the latter because of the stability of its fluid portion when separated from the concrete constituent. This fluid portion does not congeal readily, and has, therefore, been used for oiling the bushes of clock and watch wheels. The tree grows abundantly in the West Indies, the seeds yielding 30 per cent. of a clear, limpid, almost colourless oil, of specific gravity .912 at 60° F., below which it is solid. From inquiries which have been made by direction of Mr. Thistleton Dyer, director of Kew, information of a scientific as well as commercial interest has been elucidated. It would appear that there are only three species of *moringa*, viz. that already named, *M. aptera* and *M. concanensis*, but it seems that the latter is probably only a form of *M. pterygosperma* with larger leaflets. *M. aptera* grows in Upper Egypt, some parts of Syria, and Aden. It was supposed that the seed of this tree yielded the true oil of ben, but inquiries made by Dr. Georg Schweinfurth have dispelled this idea, for the Bedouins in Egypt know *M. pterygosperma* as "El Ben." *M. aptera* is known as "El Yessâr." Moreover, the seeds of these are not used for preparing oil in Egypt. Four years ago Mr. D. Morris, then director of the Botanical Department, Jamaica, prepared some oil of ben from seed of the common horse-radish tree grown there, and sent it to this country for report. The result was very discouraging, it being stated that it was "altogether unknown in this market." It was three parts congealed in the summer months, so that it would require to be put through a process of purification before it was fitted for either perfumery or lubricating purposes. It is very doubtful if true oil of ben has existed in our markets for a long time, indeed it has generally had the repute of being a greatly sophisticated article. The Kew inquiries, which are not yet completed, will very probably determine which is the source of the oil. The roots of the species have aromatic properties similar to horse-radish, are so eaten by the Bedouins, and Europeans in Bombay consider the root of *M. pterygosperma* a perfect substitute for our horse-radish. The roots are also used in native medicine as a stimulant and diuretic, and the oil of ben has lately been spoken of as a purgative. The name should not be confounded with benne oil, which is the product of the seed of *Sesamum orientale*.

Personalities.

THE will of Mr. James John Field, chemical ink manufacturer, was proved on February 30, the value of the personal estate in the United Kingdom amounting to upwards of 12,000*l*.

THE will of Mr. John Oakey, late of the Wellington Mills, Westminster Bridge Road, and of Surbiton, who died on January 10 last, has just been proved, the value of the personal estate amounting to upwards of 187,000*l*.

CANTOR LECTURES.—The concluding series of lectures for this session at the Society of Arts will be delivered by Mr. J. M. Thomson, F.C.S.—subject, "The Chemical Changes of Putrefaction and Antiseptics."

MR. H. HELBING, of the German Hospital, Dalston, who reports pharmaceutical matters for the *Pharmaceutische Zeitung*, wishes us to make it clear that he is not responsible in any way for the London market reports in that journal to which we referred last week. He has shown us on behalf of his journal the original manuscripts of some of those reports, which it seems have been sent from quite another source, and which show that the editor of the *Pharmaceutische Zeitung* has inserted the reports fully believing them to have been original.

THE PHARMACY ACTS AMENDMENT BILL.

HOUSE OF LORDS,

Thursday Night.

THE EARL OF MILLTOWN, in moving the second reading of a Bill intituled "A Bill to Amend the Pharmacy Act, 1852, and the Pharmacy Act, 1868," said: The object of this short Bill, though extremely simple, is yet of considerable importance to the general public. The Bill is framed with the view of enabling the Pharmaceutical Society of Great Britain to make adequate regulations for the educational curriculum of those persons included amongst its members. The Bill is a short one, but the matter is not unimportant when it is considered that these persons alone have the power to dispense medicines and to sell poisons. The Pharmaceutical Society was founded in 1841, and received its charter in 1843. The object for which it was founded was to promote a uniform system of education in chemistry and pharmacy. The Pharmacy Act of 1852 confirmed that charter, and made it for the first time penal for any unauthorised person to assume the title of pharmaceutical chemist. The Act of 1863 went a little further, and made it unlawful for anyone not duly qualified to sell or dispense poisons, or to assume the title of chemist and druggist. That Bill for the first time introduced the name "druggist" into an Act, and made it illegal for any person not duly qualified to sell poisons. There are certain poisons scheduled in that Act, some of which are of a more dangerous character than others, and are sold with greater caution, and the Pharmaceutical Society has power from time to time to add to that schedule. The Society consists of members, associates, and registered apprentices, each having a separate qualification, and having to undergo a separate education. The apprentices have to pass preliminary examinations before admission, and after apprenticeship a qualifying examination. But it is found that, owing to the extensive system of "cramming" which now prevails, persons desirous of getting on the register do not sufficiently prepare themselves during their apprenticeship, but trust entirely for passing the qualifying examination to a cramming course, and do not devote themselves to acquire that practical skill which it is absolutely necessary that they should acquire for the safety of the public. The 6th clause of the Act of 1868 apparently makes it imperative on the examiners to pass any person who presents himself for examination, and that being so, the Council of the Pharmaceutical Society have found themselves almost powerless in requiring such qualification in those who pass the qualifying examination as they deem absolutely essential for the safety of the public; and, in point of fact, persons who answer the questions may become qualified, although they have undergone no technical training at all. The Society have framed by-laws for remedying this defect and establishing what they consider a sufficient curriculum of study; but the Privy Council, to whom all by-laws have to be submitted, found themselves unable to confirm them, as they were of opinion that the statutes of the Society did not empower them to frame any such by-laws. In consequence this Bill has been introduced to remedy that defect. The Bill has the unanimous consent of the Pharmaceutical Society, and I believe, subject to a verbal amendment which I shall hereafter make, that it has the approval of the Lord President of the Privy Council. The second clause of the Bill gives power to the Council of the Pharmaceutical Society in cases where persons have acquired in their judgment sufficient technical knowledge in England, in any other parts of the United Kingdom, and in the Colonies to dispense with the three years' curriculum, but not with the qualifying examination. The Act is not to apply to Ireland. I trust under the circumstances that your Lordships will consent to the Bill being read a second time to-night.

The Bill was then read a second time.

Foreign and Colonial.

THE BARCELONA EXHIBITION.—It is said that the Spanish Government have resolved to make a grant of $\frac{1}{2}$ million pesetas (60,000*l.*) towards the exhibition, on condition that the undertaking shall be officially promoted by the city of Barcelona and the province of Catalonia.

COPAIBA BALSAM EXPORTS FROM MARANHAM.—The Maranham copaiba trade is gradually being usurped by the United States, at the expense of this country. From 1883 to 1884, 63 tons went to England, and $2\frac{1}{2}$ tons to the States; from 1884 to 1885 the figures were respectively 50 against 12 tons; and from 1885 to 1886, 17 against 17 tons. No other countries apparently receive any balsam direct from Maranham.

RUSSIAN CUSTOMS DUTIES.—The following decisions affecting the classification of articles in the Russian customs tariff have recently been given by the Russian Government. The following homœopathic medicines:—*Ailanthus*, *buso*, *cannabis sativa*, *cedron*, *chamomilla*, *cyclamen*, *cynophalum*, *polycephalum*, *lachesis*, *lactucin*, *pyrocarbon*, *symphytum racemosum*, *tarantula*, *viola odorata*, and *zincum* are to pay a duty of 10 roubles per pound gross ($10\frac{1}{2}$ d. per lb.), with in addition of 20 per cent. on each roule of duty leviable.

NEW CUSTOMS TARIFF FOR URUGUAY.—A new customs tariff came into operation in Uruguay on September 1 last. By its provisions perfumery pays an *ad valorem* duty of 51 per cent.; drugs, of 47 per cent.; wax, tallow, and stearine candles, of 43 per cent.; resin, mercury, and plaster, of 20 per cent.; soda, saffron, hops, seeds, acids (sulphuric, nitric, and chloric), potash, phosphorus in sticks, tanning-bark, glyewoods, of 8 per cent.; scientific instruments, of 6 per cent.; sheep-dip is free.

OIL OF PEPPERMINT ADULTERATION.—The *Oil, Paint, and Drug Reporter* mentions that a man has been arrested at Detroit (Mich.) for selling as a pure article peppermint oil from which the menthol had been extracted. It is said that of late some of the farmers engaged in the production of peppermint and the distillation of the oil have obtained the mentholised oil in considerable quantities, marketing it along with the pure article, as oil of full strength and their own production.

GERMAN ETHER AND PICRIC ACID EXPORTS.—Last year 76 tons of ether and collodion were exported by Germany, against 704 tons in 1885. Of this total France was the recipient last year of 158 tons, against only 4 tons in 1885, or an increase of 154 tons. Picric acid was exported during 1886 to the extent of 53 tons, against 33 tons in the previous year, an increase of 20 tons. For January, 1887, the export of ether shows an increase of 18 tons, and that of picric acid about $7\frac{1}{2}$ tons. This increase is mainly due to the development of the export trade with France in these materials, as in January 23 tons ether and 10 tons picric acid were exported to that country. In January, 1886, no picric acid whatever was sent to France from Germany, and only 672 lbs. ether.

THE COMMON PRICKLY PEAR (*Opuntia vulgaris*, Miller) is a cactus which grows abundantly in various parts of the world, and in India is, according to the *Indian Agriculturist*, an unmitigated nuisance. It grows on waste places and rocky ground, but hitherto little use has been made of it. We now learn that Don Fernando de la Camaras proposes to turn the fruit to advantage for the manufacture of alcohol. The paper in which this proposal was made was communicated to a scientific society in Malaga, and is in great part reproduced in a consular report. The juice of the fruit yields on fermentation a liquor containing 8 per cent. of alcohol. The peculiar odour of the fruit is retained in this, but on rectification a stage is reached (when the liquor contains 44 per cent. of alcohol) at which this odour partakes more of the character of a liqueur bouquet, and the product is fit for drinking. Our Indian contemporary, in proposing that the industry should be tried there, states that the "prickly pear grows and flourishes in India where apparently nothing else will grow. The sandy wastes of Rajpootana and of Sind abound with it. It needs no care, no irrigation or manure, and yet flourishes and bears abund-

dance of fruit. A piece of the stem only requires to be put into the ground to propagate it *ad lib.*"

RUSSIAN PETROLEUM MONOPOLISTS.—Some of the largest owners of petroleum springs in the Caucasus are trying hard to induce the Russian Government to place a heavy tax upon naphtha imported from abroad, and to raise the duty on all mineral oils to a figure which would exclude foreign competition. The object of the agitators is plain. They hold enormous stocks of naphtha and petroleum, and as soon as the duty was decreed they would reduce to a minimum the price of their commodity, at some loss to themselves, but with the result of ruining their small Russian rivals, who, having no reserves, would have to sell at depressed prices and pay the duty all the same. Once relieved from this native competition the leviathans of the trade would quickly recoup themselves by raising the price of petroleum to the level indicated by the quotations of American oil, and the consumers would be compelled to pay three or four fold what they now pay. So far the Russian Government have refused to augment the duty, but the deficit on the Budget being continually growing, it is feared that ultimately the monopolists will achieve their purpose. The proposed duty would greatly affect the poorer classes, as a large proportion of the Russian artisans work at home, and a tax on light would press severely on them, the standard of wages being already very low.

BLEEDING THE TAXPAYERS.—A pharmacist named Murphy is now in custody at Chicago charged with defrauding the county hospital, of which he was a salaried officer. It was part of his duties to purchase the drugs required for the service of the hospital, and in this capacity Murphy, it is alleged, placed all orders with a firm of the name of the "Chicago Pharmaceutical Company"—a bogus concern composed of Mr. Murphy alone. The "company" kept no stock and did no general business, but confined its operations wholly to buying for and re-invoicing to the county. Enormous discrepancies have been discovered between the prices at which the goods were purchased by the company and those at which the latter invoiced them to the county. For instance, chloride of lime was bought at $1\frac{1}{4}$ d., and charged to the county at $3\frac{1}{4}$ d.; sal-soda was bought at $\frac{1}{2}$ d., and charged at $1\frac{1}{4}$ d.; borax was bought at $3\frac{3}{4}$ d., and sold at $5\frac{1}{4}$ d.; aqua ammonia was bought at $1\frac{1}{4}$ d., and sold at $2\frac{1}{4}$ d.; oil of bergamot was bought at 9s. 7d., and billed at 13s. $4\frac{1}{2}$ d.; common chloroform was bought at 1s. 8d., and charged as Squibb's chloroform at 5s.; iron and quinine was bought at 13s. $1\frac{1}{2}$ d., and charged at 18s. 9d.; 4-oz. boxes costing 8s. 10d. were charged at 17s.; wafers costing 19s. 8d., at 31s. 3d.; Epsom salts costing $1\frac{1}{4}$ d., at $2\frac{1}{4}$ d.; and linseed meal costing $1\frac{1}{4}$ d., at $2\frac{1}{4}$ d.

WRONGFUL DISMISSAL OF AN ASSISTANT.—At Adelaide, South Australia, the case of Grundy v. Geyer, after occupying Mr. Justice Bunde and a special jury for five days, was concluded on Wednesday, February 2. Plaintiff had been managing Mrs. Geyer's business, as chemist and druggist, in Hindley Street, for three years and nine months, at a salary of 9*l.* per week. He was suddenly dismissed in September last, on its being discovered that the stock had lessened in value more than one-half during his engagement, and that the capital of the business had been encroached upon to that extent. He claimed 505*l.* damages for wrongful dismissal, 500*l.* damages for alleged libel, and 19*l.* for wages due. For the defence it was urged that, as Mr. Grundy had the entire management of the business, he should have taken stock, reduced the number of his assistants, and taken other measures to prevent the business drifting into insolvency. His Honour nonsuited plaintiff on the claim for libel, and the jury found a verdict in his favour on the other claims, and awarded 253*l.* damages. The progress of the case was watched with considerable interest, and the attendance of the public at the court was unusually large.

MESSRS. J. SANGER & SONS, 489 Oxford Street, have just issued a new prices current. It is divided into two sections, the first being a list of patent and proprietary articles, and the second one of druggists' sundries. A special feature of this list is that a column is added showing the net prices of all articles quoted, in addition to the column of invoice quotations.

LAST MONTH'S TRADE STATISTICS.

THE Board of Trade Returns for February show the following figures:—

Imports.

	February, 1886	February, 1887
Total value	£26,621,869	£28,513,994

Exports.

	February, 1886	February, 1887
Total value	£16,394,007	£17,255,133
Foreign and colonial produce (partly estimated) ..	4,946,377	5,565,708

Below are the details affecting drugs and chemicals:—

Imports.

	Feb., 1885	Feb., 1886	Feb., 1887
Drugs, unenumerated .. value £	£4,700	50,742	45,010
Chemical manufactures—			
Products unenumerated .. value £	105,423	113,606	94,483
Alkali cwt.	2,582	5,607	3,449
Brimstone cwt.	2,385	3,292	2,149
Nitric (nitrate of soda) .. cwt.	90,782	99,053	59,519
" (nitrate of potash) .. cwt.	21,836	23,721	13,825
Quicksilver lbs.	341,820	111,444	30,007
Bark, Cinchona cwt.	154,964	61,112	13,505
Gum Arabic cwt.	17,628	28,762	19,322
Lac, seed, shell, stick, and dye .. cwt.	15,551	25,226	16,465
Spices—			
Cinnamon lbs.	345,225	936,600	723,085
Ginger cwt.	30,923	75,000	70,121
Pepper lbs.	5,974	9,082	11,416
" cwt.	48,225	61,316	56,081
" cwt.	11,427	16,936	2,017
" cwt.	40,591	60,817	10,320
" cwt.	4,562	11,166	7,122
" value £	14,612	33,402	20,028
Dyes and tanning materials—			
Bark (for tanners' or dyers' use) .. cwt.	14,508	17,361	12,841
" value £	5,141	5,687	4,446
Aniline dyes cwt.	20,424	22,471	20,866
Alizarine cwt.	22,073	22,149	17,925
Other coal-tar dyes cwt.	414	18	5
Cochineal cwt.	2,044	1,720	583
Cutch and gambier lbs.	12,800	11,053	6,033
" value £	1,159	2,815	1,563
Indigo cwt.	25,919	61,035	34,643
" cwt.	24,931	28,950	33,715
" value £	589,694	733,150	£60,472
Madder, madder root, garancine, and munjeet cwt.	2,019	2,494	1,661
" value £	3,040	2,821	2,231
Valonia cwt.	3,025	4,380	4,489
" value £	49,601	64,446	68,236
Oils—			
Cocoa-nut cwt.	4,825	5,377	5,174
" value £	7,249	6,829	8,777
Olive tons	2,936	1,356	2,744
" value £	118,590	55,478	100,984
Palm cwt.	63,020	63,345	63,419
" value £	119,125	74,319	66,734
Petroleum gals.	4,240,145	3,503,148	8,721,788
" value £	128,183	111,439	230,733
Seed, of all kinds tons	1,011	1,221	965
" value £	31,235	29,436	22,764
Train, blubber, and sperm tons	1,307	355	592
" value £	28,079	9,501	14,570
Turpentine cwt.	23,642	32,734	25,226
" value £	26,445	45,033	35,383
Rosin cwt.	114,022	79,261	69,928
" value £	23,959	14,671	14,266

Exports.

	Feb., 1885	Feb., 1886	Feb., 1887
British and Irish produce—			
Alkali cwt.	432,180	431,683	441,411
" value £	128,060	136,546	125,109
Bleaching materials .. cwt.	103,921	109,834	127,944
" value £	34,872	41,333	47,709
Drugs and medicinal preparations	64,572	59,898	63,321
Seed oil gals.	6,305	5,797	5,759
" value £	146,074	122,910	119,094

Exports—continued.

	Feb., 1885	Feb., 1886	Feb., 1887
British and Irish produce (continued)—			
Soap cwt.	32,918	35,037	38,804
" value £	37,193	38,715	37,553
Painters' colours and materials (unenumerated) .. value £	86,458	96,277	104,393
Foreign and Colonial merchandise—			
Bark, Cinchona cwt.	8,336	10,030	17,476
" value £	47,216	46,699	76,560
Chemicals (unenumerated) .. cwt.	18,978	12,463	12,280
Cochineal cwt.	965	1,034	653
" value £	6,793	7,698	4,514
Cutch and gambier tons	690	773	611
" value £	14,741	19,405	15,481
Gum Arabic cwt.	2,130	2,409	3,852
" value £	8,009	10,374	17,493
Indigo cwt.	12,050	10,793	10,108
" value £	276,668	261,930	229,046
Lac, seed, shell, stick, and dye .. cwt.	5,480	6,703	4,381
" value £	18,765	19,412	12,484
Oils, cocoa-nut cwt.	5,554	6,174	3,183
" value £	8,843	8,562	4,507
" olive tons	248	121	130
" value £	11,251	6,329	5,769
" palm cwt.	45,465	36,418	33,519
" value £	66,232	42,731	36,568
" petroleum gals.	78,429	44,412	23,620
" value £	3,834	2,125	1,223
Quicksilver lbs.	293,517	367,964	242,380
" value £	25,340	28,332	22,979
Nitric (nitrate of potash) .. cwt.	1,829	1,155	818
" value £	1,627	1,021	687
Spices, cinnamon lbs.	157,644	154,101	95,103
" value £	6,463	4,979	3,224
" pepper lbs.	1,308,828	1,093,379	1,223,000
" value £	40,763	38,189	39,877

Trade Report.

Note to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., March 17.

THE changes in the drug and chemical markets this week are few, and mostly towards lower values. The principal feature of the week has been the fresh decline in cinchona bark, which sold at an average reduction of about 8 per cent. The Quinine makers have not altered their official quotations, but second hand holders still offer German brands in bulk at 1s. 10d. per lb. The Amsterdam quinine works will be sold by public auction next month, as announced elsewhere in our columns. Cocaine remains steady, and Morphine very firm, reports from Asia Minor mentioning absence of rain, and opium values on the Smyrna market being higher than here. Mercury has been reduced in price by the importer, and all mercurials have consequently fallen 1d. per lb. Bromides and Iodides firm but unchanged. The report that the Stassfurt chemical works were about to undertake the manufacture of Saccharin is officially contradicted. Arsenic, Ammonia sulphate, and Soda nitrate have advanced, but Soda crystals are rather easier. The competition among German soda-makers is increasing in bitterness, all attempts at forming a union having been unsuccessful. Borax is firmer, but no change has yet occurred in the price. The Stassfurt potash syndicate are about, it is said, to increase the output of salts by 250 tons from April 1, and by a further 250 tons from May 1 next.

In spices there is little doing, Ginger being the only exception. This article, so far as the new Cochin crop is concerned, sells steadily, the finer grades at higher prices, Cocanut, Cottonseed, Olive, and Petroleum oils are weaker.

ut Turpentine has improved, while Castor oil remains very firm, and the Norwegian reports concerning the cod-fishing confirm the view that higher prices will shortly be seen.

In the gum sales held to-day lower values are expected for Gum Arabic, especially for the Ghatti variety. Gambier is dearer, but Shellac has been sold, it is said, at the lowest price on record, viz., 43s. per cwt. for standard second orange (TN) distant shipment.

CINCHONA.—The total supply brought forward on Tuesday was much below that offered at the previous auctions. It consisted of 2,612 packages from Ceylon, 618 from India, 9 from Java, and 507 from South America. A tone of depression again prevailed; holders showed considerable anxiety to realise, and a further drop of from five to ten per cent. was established, the commoner varieties suffering the least depreciation, and fine Indian chips most. The unit cannot now be quoted higher than 2½d. to 2¾d.

The sales of SOUTH AMERICAN bark comprised about half the quantity offered of that variety, 4½d. to 5d. being obtained for Cuprea.

Of the CEYLON bark very little was bought in, and the following prices were obtained:—*Succirubra*: Chips mixed with branch, 2½d. to 4½d.; stem, chips ordinary to fine, 3d. to 4½d.; spoke shavings, 4½d. to 6d.; root, dull to fine rich, 5d. to 10½d.; quill, crushed to fairly bright druggists', 5d. to 8s. 3d.; renewed, 3d. to 1s. *Officinalis*: Dust, 3½d. to 4d.; natural, chips, 2d. to 5½d.; stem, chips, 3½d. to 7½d.; spoke shavings, 4½d. to 11d.; root, 5½d. to 9½d.; quill, 5d. to 8s. 3d. for dull weak renewed to very fine ditto.

Nearly the whole of the INDIAN CINCHONA offered consisted of good Madras bark of the well-known OCC and NCC brands, which sold very cheaply. *Succirubra* chips, natural or good renewed quills, at 4½d. to 10d. *Officinalis* chips, air to fine bright mossy, 5½d. to 1s. 2d.; root, 8d. to 1s. 4d.

The small supply of JAVA bark sold fairly well at 8½d. to 10d. for *officinalis* root, 8d. for small quills chips, and 6d. for oak long red quill.

The cinchona sales held at Amsterdam on March 10 last comprised 1,236 packages, weighing about 87 tons; 743 packages belonged to the *Ledgeriana* variety, 103 to the *Officinalis*, while the rest was made up of druggists' bark, mostly *succirubra* and *Schuhkraft*. The prices realised correspond with the actual low value of quinine, but rather higher rates were paid in some instances for fine druggists' bark. There was a good show of fine stout grey druggists' quill, and perhaps the best prices realised by any lot were those paid for some parcels of *Schuhkraft* bark. Four cases thin Loxa-ke quills, partly double length, mostly brown, containing only 0.29 per cent. sulphate of quinine, sold at 53 cents per kilo.

The following figures indicate the volume of the imports of cinchona bark into France, and the exports from that country, in 1886, as compared with the two preceding years:—

Imports.

	1886	1885	1884
	Kilos.	Kilos.	Kilos.
From Great Britain ..	827,883	602,109	696,884
„ New Granada ..	207,825	127,738	467,943
„ Peru ..	71,370	21,401	46,276
„ other countries ..	209,168	187,801	754,340
Total ..	1,316,246	939,049	1,935,443

Exports.

	1886	1885	1884
	Kilos.	Kilos.	Kilos.
To Great Britain ..	233,927	81,455	266,948
„ Germany ..	24,135	162,698	131,522
„ Holland ..	14,098	—	—
„ other countries ..	98,519	83,113	691,092
Total ..	370,679	322,666	1,089,562

CASSIA LIGNEA.—The price is slowly falling; in fact, it is hard to see where an improvement could come in. The reports during the present year have been extremely small, and the deliveries fairly large, but our stock is still exceedingly heavy. In yesterday's sale 25s. per cwt. was paid.

CHILLIES remain unchanged. In auction yesterday ordinary brown of the old crop sold at 31s., and fairly bright new crop at 32s. 6d. per cwt.

CLOVES.—The decline which occurred last week made no further progress in yesterday's sales, and some business was done at 10d. to 10½d. per lb. for fair to bright Zanzibar.

GINGER.—There is a brisk demand for the new *Cochin* crop, and the 391 packages of this class brought forward found a ready sale. Rough and washed kinds are rather cheaper, but cut sold at an advance of from 1s. 6d. to 2s. per cwt. for small to bold. No really fine cut ginger was offered; the nearest value for this grade would be about 105s. per cwt. Old *Cochin* ginger is easy. In sale the following prices were paid:—*Cochin*, new crop, rough, small to fair brownish, 24s. 6d. to 30s.; bright ditto, 31s. to 32s.; washed, small and medium to bold and medium, 30s. to 40s.; medium to bold cut and partly cut, 54s. to 55s.; good bright small cut, 38s.; medium, 54s. 6d. to 56s. 6d.; bold, 75s. to 82s. Limed *Japan* ginger is worth 14s. New *Jamaica* ginger of ordinary and medium quality is rather lower, the quotation being 35s. to 43s. for lean to small washed Rhatoun.

NUTMEGS.—Prices are about unchanged, but the demand has slackened and the bulk of the quantity offered was bought in.

PEPPER (BLACK).—Steady but quiet, good *Singapore* selling at 7½d. per lb. on the spot, and fair *Aleppy* at 7¾d. per lb. For arrival 25 tons *Singapore*, per February steamer, changed hands at 7½d. per lb. *Singapore* advices dated February 14 state that during the month a very large business has been transacted on that market, amounting to no less than 1,000 tons. The contracts reported from December 1 to date amount to 3,250 tons, against 2,500 tons in the same period a year ago, and this increase, it is believed, will not be lost later on.

PEPPER (WHITE).—The market is quiet and everything offered in auction was bought in, *Singapore* at 12½d., and *Penang* at 11½d. per lb. About ¼d. per lb. less would be the market price. We hear from *Singapore* under date of February 14 that prices have declined, notwithstanding the supplies have been limited, and dealers assert that the crop will be short. A feeling of depression prevails in the market.

PIMENTO.—The demand is very sluggish, but prices are well maintained, small sales of good *Jamaica* being reported at 2½d. per lb.

CASTOR OIL remains very steady at previous prices, but in Liverpool the market is tending higher, good *Calcutta* seconds having been sold at 23½d. per lb. The recent advance caused on the Indian market by the demand for illuminating purposes has been maintained, and it does not pay exporters to ship the oil under the circumstances.

COCOANUT OIL is languid, and distant shipments are rather casier, while prompt delivery maintains the recent nominal values of 26l. for *Ceylon* in pipes and puncheons, and 26l. 10s. for hogsheds. *Cochin* in pipes is quoted at 35l. to 36l. on the spot, and *Mauritius* at 26l. 10s. to 27l. In this country *Cochin* oil, owing to its greater richness in stearine, is used principally in candle-making, while the *Ceylon* variety is more favoured by soap-makers, although even in this case the *Ceylon* oil has hitherto suffered by its darker tint. The *Ceylon* producers are now trying to turn out a whiter oil than heretofore by rejecting the smoke-dried and blackened copperal they have hitherto employed, but it is thought doubtful whether the greater cost of the raw material will be compensated for by the difference in price. The poverty of stearine in *Ceylon* oil is thought to be partly due to excessive heating in drying the kernels or abstracting the oil.

COD-LIVER OIL.—The reports from Norway remain rather unfavourable. According to the latest statistics, giving the result of the fishing up till March 14, only 3,600 barrels oil had been made this season, against 7,800 barrels last season. This includes the non-medicinal oil.

COTTONSEED OIL on the spot is cheaper, and quoted at 16l. 2s. 6d. for *crude*, and 18l. to 19l. 10s. for *refined*, according to brand and packing. The Hull price is 15l. 7s. 6d. for *crude*, and 17l. 7s. 6d. for *refined* in casks.

LINSEED OIL remains steady, although the business transacted is of a small volume. The following are the quotations:—London, spot, pipes, waterside, 20l. 2s. 6d.; land, 20l. 5s., barrels, 20l. 7s. 6d.; March-April, 20l. 7s. 6d.; May-

August, 20l. 7s. 6d.; September-December, 19l. 17s. 6d. to 20l. Hull spot: casks, 19l. 15s.; barrels, 20l. 2s. 6d.; April-May, 19l. 17s. 6d.; May-August, 19l. 17s. 6d.; September-December, 19l. 17s. 6d.

OLIVE OIL again lower, *Mogadore* having sold at 31l. 10s. The nominal quotation for *Spanish* oil remains at 36l.; for *Sicilian*, at 34l.; and for *Levantine*, 33l. to 33l. 15s. The Messina market on March 8 was rather firmer, because operators, having sold on speculation, had to buy in order to fulfil their engagements.

PALM OIL is still held at 22l. to 22l. 10s. for fine *Lagos*. In Liverpool the market remains quiet, but without change in prices.

PETROLEUM continues to decline. *American* on the spot is now quoted at 4 $\frac{1}{2}$ d. to 5 $\frac{1}{2}$ d., according to brand; March at 5d. and September-December at 5 $\frac{1}{2}$ d. to 5 $\frac{5}{16}$ d.

RAPE OIL has undergone no farther change. English refined is held at 22l. 10s. on the spot; *brown* ditto, at 20l. 17s. 6d. to 21l.; forward delivery, in all positions, is quoted at 21l. to 21l. 5s.

ROSIN unaltered, at 3s. 9d. to 4s.; for common American strained up to 12s. to 12s. 3d. for fine water white.

TALLOW.—*St. Petersburg* yellow candle is still quoted at 31s. on the spot. In *Australian* tallow no business whatever is reported, and only nominal prices can be quoted.

TURPENTINE has risen to 27s. 9d. for *American* spirits on the spot; 28s. 3d. for April-May; 28s. 6d. for May, and 26s. for July-December. *French* spirits are not quoted.

ACID (CITRIC) remains quoted at 1s. 9d. per lb. on the spot, but there is little business going on in the article. The Sicilian market in *concentrated lemon-juice* is very quiet, and as the stock is increasing, and now numbers already over 3,000 pipes, all told, it is thought that no considerable advance can occur under ordinary circumstances. The Messina quotations on March 8 were from 19l. 10s. to 19l. 15s. f.o.b.

ACID (OXALIC) firmly held at 4d. per lb., while *sal acetos* is obtainable at 6d. to 6 $\frac{1}{2}$ d.

ACID (TARTARIC) remains firm at 1s. 7d. per lb. for *English*, and a fraction of a penny less for *Foreign* brands. There is a good demand. In Italy very high prices are being paid for tartar materials, and all parcels offering are quickly bought up.

ALUM remains steady at 5l. 10s. for loose lump, and 6l. 2s. 6d. for ground alum in bags. There is a fairly good trade doing.

AMMONIA.—*Carbonate* remains neglected at 3 $\frac{1}{2}$ d. per lb. In *Sal ammoniac* a fair business is being done at 36s. for first, and 34s. for second quality. A further advance has been established in *Sulphate*, which is now quoted at 12l. 10s. in London, and 12l. 7s. 6d. at Hull for 24 per cent. grey.

ARSENIC is firmer and quoted at 11l. 15s. to 12l. per ton for powdered white.

BLEACHING POWDER still firmly held at 8l. 15s. to 9l. per ton. The American demand has apparently subsided somewhat.

BORAX has been in very good demand throughout the week, and the tendency is rather firmer, although no change in value can yet be reported.

COPPER (SULPHATE) remains steady at 14l. 5s. for ordinary firsts.

CREAM OF TARTAR rather quieter at 123l. to 123l. 10s. for firsts.

EPSOM SALTS.—On March 10 a parcel of 10 cases Epsom salts, each case containing 16 boxes of 7 lbs., was offered in the London drug sales, but no offer being forthcoming the parcel was withdrawn. These salts were imported per "*Mermevius*" at Melbourne, they were done up in 1-oz. packets, bearing the name "*Lewis & Whittys*." This firm was among the exhibitors of soaps, &c., in the Victoria Court of the Colonial and Indian Exhibition.

LEAD (ACETATE) is still much inquired for, and hardly anything is obtainable on the spot. For arrival, 23l. 10s. per ton has been paid for good *foreign*.

POTASH.—*Bichromate* unchanged, at 3 $\frac{1}{2}$ d. per lb. *Chlorate* is very firm, at 6 $\frac{1}{2}$ d. per lb. for prompt delivery, supplies being somewhat short. *Prussiate* is a shade firmer, at 7d. per lb. A parcel, manufactured at Falkirk, N.B., was offered in the last drug sales, but met with no bid.

QUICKSILVER.—The importer has reduced his price to 7l., while second-hand holders quote 6l. 19s. 6d. This reduction was generally expected, importer's price having lately been out of proportion to the quotations of other holders. Yesterday the quotations for *mercurials* were reduced by 1d. per lb. all round.

QUININE remains very dull, although the makers still maintain their official quotations.

SODA ASH is very quiet, the London quotation being 1 $\frac{3}{16}$ to 1 $\frac{1}{4}$ per degree per cwt. *Bicarbonate* is in good request at 7l. 5s. ex warehouse. In *Caustic* soda there is little business, and prices remain as before, 7l. 15s. for cream, and 8l. to 8l. 5s. for 60 per cent. white. *Crystals* are again somewhat cheaper, holders having been rather anxious to meet the market. 2l. 10s. is quoted in London, and 2l. 3s. 6d. on the Tyne. *Nitrate* continues to advance, a large demand from the Continent being given as the principal cause of the rise. In London 10l. 15s. to 11l. is now quoted, and at Liverpool 11l. per ton.

SULPHUR in little demand, *rolls* at 7s. 6d. to 8s. 6d., *flowers* at 9s. 3d. to 10s. per cwt. according to brand.

COCA LEAVES.—Our stock of good qualities is said to be very small, and fair *Huanuco* leaves are worth from 1s. 3d. to 1s. 6d. per lb. In Ceylon the cultivation of the coca shrub is not extending very rapidly, but perhaps the improved aspect of the position of the article may bring about a change for the better. It is certain that the soil in many parts of the island is well adapted for the culture, and that the industry would yield a handsome profit if the leaves would sell in England at 1s. per lb.

CUTCH.—At the beginning of the month our stock numbered 27 bags in first hand. Prices remain unchanged. The Singapore market, according to the latest reports, was very bare; sales of fair berries had been made at a parity of 13l. 16s. per cwt.

CUTCH.—Very little is doing in this article, and prices remain generally without alteration, although *RS* and *MM* slabs are about 6d. per cwt. cheaper since our last report, and are now held at 28s. and 29s. per cwt. respectively.

GAMBIER dearer and firmly held, although much of the business transacted is stated to be of a speculative character. For good *block* now landing 22s. 9d. per cwt. is wanted, and 33s. per cwt. for good free cubes. Supplies of importance were not expected to arrive on the Singapore market until the middle of March.

GUM KOWRIE.—Reports from New Zealand state that the diggers have now to seek for the gum so far from the settlements that the expense of transportation adds materially to the cost of the article when put upon the market. The long depression in trade in New Zealand has induced a large number of people, who engage in the occupation only as a last resort, to go to work at digging for the gum. Still, notwithstanding the increased number of diggers, supplies come in very slowly from the interior.

SHELLAC.—It is said that sales of standard *second orange* *TN* have been made at 43s. per cwt., c.i.f., for March-May shipment, the lowest price on record. On the spot very little business is doing, and the assortment offered in the drysaltery sales was very meagre. About 2,500 cases A C Garnet, the balance of the season's make, are reported sold at 40s. 6d., c.i.f., per cwt. First button lac is offering very cheaply at 58s., c.i.f., per cwt. On February 22 the Calcutta market remained very flat, and small sales only were transacted. Some good marks, such as *V.S.O.*, were rather lower, but most of the good native marks are not pushed on the market, owners having made considerable sales for forward delivery. Of fair and good button lac large quantities were offered for sale, but the demand was confined to the lower sorts.

TURMERIC.—In public sale on Tuesday 600 bags boldish but wormy *Madras* finger sold at 1s. 3d., and low wormy bulbs at 6s. 9d. to 7s. 6d. per cwt. The stock at Calcutta is said to be accumulating owing to the neglected condition of the article.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

Before writing for formulæ consult the last volume, if you have it.

The Trade Association.

SIR,—In writing to your widely-read journal my object was, as stated, to invite, indeed to solicit, the opinions of practical men on a very practical and important matter, viz. how to make the Association of the greatest possible use to the largest number of persons interested in our calling. Had it been otherwise, my knowledge of Mr. Haydon is sufficient to have justified a further eulogy than is contained in the words "our worthy secretary." That he would be repaid the amount expended on the issue of the circular was, I presumed, a foregone conclusion—a matter to be dealt with by the Executive at its next meeting; and the reference to his individual responsibility in the matter had no special bearing on the question as to who should pay the cost. But I hold that this is no time for indulging in compliments; we want well-considered practical suggestions, and the means of carrying them into effect. You, sir, have on two occasions recently pointed out that some kind of reorganisation was needed, and have given some hints for future procedure. Let us have in your correspondence columns more of this. Let some members of the trade tell us why they have never joined the Association, and others why they have seceded from it. Let others (like Mr. Wyatt and "Provincial") say what in their opinion is the best foundation on which to build.

Hitherto the Association has acted both on the offensive and defensive whenever it was considered that general trade interests were affected. Is it to continue both of these functions and still be the society militant as heretofore?

It has aimed at existing for the welfare of all concerned (and whether acknowledged or unacknowledged, the whole trade has doubtless been benefited by its operations), and it has desired to have a large roll of members with but a small subscription, so as to be thoroughly representative in character. Is it to abandon this position, and to collect a larger subscription from a smaller number of persons, and to operate on behalf of members only?

This latter idea seems to be gaining favour, and I therefore think it desirable to point out one or two difficulties which attend such a position.

Suppose a Bill is introduced into Parliament containing one or more clauses inimical to the interests of chemists generally; if this is effectually opposed the result must benefit non-members. Or it may be that an unregistered person opens a shop in the immediate neighbourhood of two chemists, one a member the other not so. Is the Association to refuse action because the advantages would be shared by one who does not contribute to its funds? Again, outside persons may become victims of frivolous or vexatious prosecutions at the hands of public analysts and others, and may lose cases for want of being properly defended. For this, of course, the Association would be in no way responsible; but nevertheless its members would be prejudiced by their con-

victions being successful, and being taken as precedents in other cases. For these and other reasons I do trust that the whole body of registered chemists will bestir themselves—that each will feel an individual responsibility in giving a helping hand, not merely by subscribing, but by taking a personal interest in rendering the reconstructed Association thoroughly representative of the trade interests of the commonwealth of pharmacy in Great Britain.

Faithfully yours,

A MEMBER OF THE EXECUTIVE. (69/17.)

SIR,—The letter from a "London Pharmacist," which appeared in your journal a week or two since, complaining in the most noble and disinterested manner that the Committee of the Trade Association had not subscribed with sufficient liberality to pay off its debts, has suggested to me a way out of its difficulties.

I am told that hitherto the men conducting the business of the Association have actually had their travelling expenses allowed them. Surely this is great extravagance; and if in future they not only defrayed their hotel expenses, as they have done in the past, but also paid their railway fare, a great saving would at once be effected; if also the solicitor, secretary, clerk, and office-boy would only work for nothing, the cause would be materially helped. An effort might also be made to get the office rent free, and to induce the post-office to transmit our correspondence gratuitously; but I fear this is hopeless.

But the best part of my plan is yet to come. You, sir, have suggested that the Committee should be paid. I, on the contrary, propose that they should pay, for it is well known that none but rich men can conduct business matters properly, and if any chemist is so insane as to think otherwise, all I can say is that he knows very little of what is going on in the pharmaceutical world; therefore I say, get together thirty or forty men (the more the better), each to pay 25*l.* per annum for the glorious privilege of defending his fellow-tradesmen. A "London Pharmacist" would surely be one of the first to join, and might well be selected president—president, of course, to pay double. Here, sir, is a glorious way out of the difficulty. I, who have hitherto been considered rather a fool than otherwise (some of my friends profess to wonder how I got through the exams.), present it without charge for the consideration of my brethren, and I am, sir,

Your obedient servant,

SIMON STULTUS.

London Charges.

SIR,—In a recent number of your valuable publication you alluded to the fact that London is in danger of losing some of its business on account of the cumbersome method of conducting it and the endless extra charges. The remarks are certainly well taken. We have before us an invoice just received, which has the following items attached:—Consul fees, 10*s.* 6*d.*; oath, 1*s.* 6*d.*; B. L. and postages, 2*s.* 6*d.*; clearance at customs, 2*s.*; commission, 1*s.*; dock and shipping charge, 2*s.*; packing cases, 9*s.*; boxes and cartons, 2*l.* 5*s.* 8*d.*, and it is not unlikely that some items are yet forthcoming!

Respectfully yours,

St. Louis, Mo, Feb. 22.

MEYER BROS. & CO.

Experiences in Queensland.

SIR,—I have read your correspondent's letter describing his "Experiences in Queensland" with a very great deal of interest. Actual experience of life in the colonies is most valuable, especially to those amongst us who have sons to start in life. Unfortunately, real, simple facts in this matter are hard to get, therefore I hope to see the correspondence kept up in your columns by other colonists. "Ora et Labora" has written a manifestly honest letter; but I cannot believe he has exhausted the subject. With your permission I should like to show how your correspondent's communication seems partial, although evidently intended to be just the opposite. In the first place, it seems a very extraordinary thing that a chemist depending chiefly on dispensing should be able to get a living out of a population of thirteen hundred inhabitants. What possible chance would he have of doing that in a remote district in this country?

Enumerating the local institutions your correspondent mentions the State school. Why therefore is it necessary to send one's children to Sydney or Melbourne to be educated? Is a university education absolutely necessary to the middle class in Australia?

The other thing which strikes me as extraordinary is that a man who has lived all his life in London except the last two years, should be able to get a living at all in the drug trade in a remote part of Queensland. It is impossible to imagine a worse training for such a life. Herein lies, I venture to think, the secret of your correspondent's discomfort, and I should like to hear the Australian experiences of some chemist who was born, bred, and trained in a rural district of the old country. Personally, I know nothing of colonial life, but have known a good many men try it in an ordinary way. The result is whenever I now see a young fellow start for the colonies who is town bred and educated, whose accomplishments are a little indifferent Greek and Latin, and a good knowledge of cricket and football, I feel sorry for him. He is going to be a dismal failure. On the other hand, when a young fellow starts with a fair middle-class education in him, ready, willing, and able to conform to almost any conditions of civilised life, I feel he is doing the right thing. He is probably going to do well, with more scope and less favour than at home. Is it not possible different conditions in breeding and training affect the success and comfort of emigrating chemists to the Colonies in the same way? I sincerely trust you will get more letters on the subject from Australia, also from New Zealand and Tasmania.

Yours faithfully,

Highgate, March 12.

C. SAUNDERS.

The Present State of the Pharmacy Act.

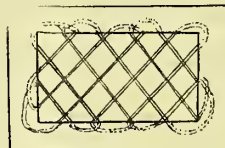
SIR,—I think every one will feel obliged to you for the powerful articles which have from time to time appeared in your journal with regard to the duty of the Society in doing something to amend the Pharmacy Act, which has now become absolutely useless. You have endeavoured again and again to urge them on to do something in the matter, but so far, I fear, without much success. Not only by the dispensing carried on by so-called co-operative stores is the intention of the Act set absolutely at defiance, but it has now become no uncommon thing for unqualified individuals throughout the country to start in business, get the necessary shares taken up by friends, style the affair a company, and carry on business with impunity. I am willing to admit that it will be far more difficult to get the Act amended now than it would have been some years ago, and that Parliament will doubtless look with some suspicion on a matter which has so much the appearance of benefiting a particular class, but each day adds to the difficulty. Custom will soon be pleaded as a right by those who now openly ignore the intention of the Act. Every one knows that the Pharmacy Act of 1868 was not passed for the benefit of chemists, but for the protection of the public. Either the public need that protection, which at the present time they do not get, or they do not; but it is clearly against the rules of common-sense to suppose that Parliament, or any independent body of men, would say, if this matter was carefully and thoughtfully taken up and brought before them, that the individual must do what the company need not. What, may be asked, is the use of the Society trying, while things remain as they are at present, to pass their curriculum scheme? They cannot, even if they do pass it, make it anything but a failure so long as the greater evil is allowed to exist; for while the Act can be evaded by companies and individuals styling themselves such, I do not think many will willingly put themselves to the trouble and expense this scheme would entail. I am sure the opinion of the trade is one of indignation at the apathy so long shown to the far greater and pressing matter to which I allude. The curriculum scheme of the Society may be all that they claim for it, but how can they expect much interest to be taken in it while a matter of such vital importance, a matter affecting every individual in the trade, is to all appearance ignored and put on one side in favour of one of comparative insignificance? It is a matter, sir, of such far-reaching and deep importance to every member connected with the trade, that I do not think they ought to quietly go on waiting for the promised introduction of the Government Poisons Bill, which may be "in the dim and distant future." The evil, as

I have said, grows, and it is for them to meet it, if they wish to regain the confidence of the trade. The time has come for one thing or the other—either for the Act to be made to answer the purpose for which it was intended, or to do away with it altogether.

SOUTH COAST. (60/66.)

Toy Waterworks.

Mr. W. S. Harvey, of Margate, who sent us a description of easily-made toy waterworks at Christmas time, now writes to the effect that his offer to give particulars to anyone who might ask him for the same has been largely taken advantage of, and as inquiries are still being received he sends the following description and sketch for publication. To make the waterworks select a few pieces of glass-tubing of equal length and bore, and, having rounded off the edges with a file, connect them by means of black feeding-bottle tubing, and arrange them in any pleasing position such as the following.



A very good plan is to remove the ends of a box, and replace the wood with wire netting; pass the glass tubes through the meshes and lay into position; now fix this into another box a little longer than the first, to allow room for the bends of indiarubber joints, and to enable it to stand on end; the whole can be neatly covered with cork or other material according to taste, leaving only the tubes visible; the inside of the box being hidden by mirrors placed at acute angles. These have also the illusory effect of multiplying the tubes.

Two tube-ends are to be left open, and a long piece of indiarubber tubing attached to each. One of these tubes should have a piece of compo gas-pipe fixed to it at the highest point with a microscopic hole pierced in it to supply air-bubbles. The pace of flow may be controlled by two food-regulators, one attached to the supply pipe before it reaches the air-hole, and the other at the delivery end; this latter also acts as a stop-tap. Have gallon cisterns for supply and discharge. Start by sucking out the air, and regulate *ad lib.*

Another Risk.

SIR,—Rather a curious affair occurred in my shop here this morning, which might have done more damage. Not having the blind down in front of the window as usual, and the sun being very strong, the rays, after passing through a large carboy filled with the usual solution of bichromate of potash, were thrown on to the woodwork of window enclosure, soon burning a piece nearly $\frac{1}{4}$ in. thick and 4 in. long; more would have followed had I not discovered it in time. Should like to know if you have heard of a case like this occurring before.

Yours truly,

37 Tone Street, Hertford, March 16.

G. W. FITTON.

The B.P.C. Formulary Committee.

SIR,—In reference to the private letter to which allusion has been made in your columns under the above heading, I beg to say: 1. That not one word except the signature is in the handwriting of the author. 2. That the misspellings were due to a clerk. 3. That the proposed resolution was addressed to gentlemen who were in a position to understand both its meaning and its object, and not to general readers; and 4. That I have very good reason to believe that the publication of a portion of this private letter should not be imputed to some "black sheep" upon the committee, but to a dishonest person (who must not suppose himself to be unknown) who (no doubt indirectly) conveyed the information to your office.

I am, &c.,

THE WRITER OF THE LETTER IN QUESTION.

Medicine Stamp Prosecutions.

SIR,—Referring to my letter to you concerning quinine and iron tonic and the Commissioners of Inland Revenue, since writing to you I have discovered that I had in my window a card with exactly the same wording as the small handbill I sent you, with the exception that it was headed

"Lucas's Quinine and Iron Tonic." This I had written some years back, and had quite forgotten all about it. Doubtless it was the cause of the mischief, although it was the only one I had, and the preparation has not been advertised in any other way. I scarcely think, had it not been for this, that I should have been troubled, for I am of opinion that the label and handbill are not in themselves liable. I write and let you know this, as doubtless some would become alarmed, as it is a preparation so universally sold.

I have written to the Commissioners, and they have been good enough in this instance to reduce the penalty to 1*l.*, which (taking your correspondent "Ovis's" advice) I have promptly paid.

I think it behoves all chemists to be on their guard, and to examine their labels, &c., as the authorities seem to be extremely active.

Nearly every chemist in this town has had a visit, resulting in proceedings against two of us, and they have also seized upon a confectioner and a bootmaker, the one for a cough lozenge, and the other for a corn cure.

Thanking you for your notice of my communications,

I am, dear sir, yours very truly,

JOSEPH M. M. LUCAS.

162 Windmill Street, Gravesend, March 16.

The Profit on Tincture of Strophanthus.

SIR,—As serious charges have been made against us in the *Therapeutic Gazette* of asking an excessive price for tincture of strophanthus, and as these were mentioned in *THE CHEMIST AND DRUGGIST* of March 5, we hope you will give us space to clear ourselves.

A short time ago we had occasion to expose (*Pharmaceutical Journal*, November 27, 1886, p. 444) a quasi-scientific effort on the part of the editor of the *Therapeutic Gazette*—the trade journal of an American drug house—that purported to demonstrate the worthlessness of a distillate of the green bark and twigs of the *Hamamelis Virginica*. In the article in question the experiments detailed were made with the "pulverised dry root," which was macerated for ten days with the view of ascertaining how much volatile principles the fresh twigs contained! At the time we incidentally observed that this "drug house" had a fluid extract of the "dried root" to sell, but no distillate of the fresh twigs; and, furthermore, we inquired what would be thought of experiments instituted to determine the value of rose, laurel, or elder-flower water (all made with fresh petals or leaves), if the experiments were directed upon the pulverised dry root, macerated for ten days. To this they were unable to reply. Their answer, however, appears to have assumed the form of an attack upon us for the commercial introduction of strophanthus.

Perchance not forgetting this exposure, and with longing eyes fixed upon strophanthus, this trade journal of an American drug house descants after this manner: The profit must "simply be enormous, and the firms (who handle strophanthus) expect to become millionaires at the expense of the public through the sale of this drug . . . and have so advanced its price as to make at present, *in view of the uncertainty of its action* (italics ours), any ordering of the new heart tonic in physicians' prescriptions unwarranted." This attack is specially unfair, for, so far as the expense of strophanthus is concerned, we may say that up to the present time we have not yet made a net profit on it, and have reduced the price as fast as we were warranted in doing.

The original cost of the pods and seeds together—and we shall be pleased to show our books and invoices in evidence—was quite 4*l.* 10*s.* per lb., and we were able to get 4½ oz. of seed out of each pound, so that the seeds cost 20*s.* per oz. For a pint of the tincture the following represents the cost, as at first prepared of 1 in 8 strength:—

	£	s.	d.
Strophanthus seed (2½ oz. at 20 <i>s.</i> per oz.) ..	2	10	0
Ether, for extracting oil (10 oz.) ..		3	0
Spt. vin. rect. (1 pint) ..		2	6
Picking, cleaning, and grinding seeds, and other labour ..		1	6
Total cost of 1 pint ..	2	17	0
Cost of 1 oz. of tincture would therefore be ..		2	10
Glass stoppered bottles (two for each ounce) ..			5
Wrapping, label, filling, cleaning, &c. ..			2
Total cost of each ounce in ½-oz. bottles ..	3		5

Our selling price at first was 2*s.* per ½-oz. bottle, subject to our usual discount to the trade. The cost of distribution in single bottles was very considerable. The above figures, of course, do not take into account the cost of advertising, and the personal efforts and other expenses incidental to procuring and supplying a rare drug like this. The trouble and expense which we have sustained have been very great, and we are dependent upon future sales for any profits on the drug, despite the computations of the *Therapeutic Gazette*, which are as far off the mark as the experiments with the pulverised dry root of the hamamelis were. The difficulties at first experienced in procuring the drug were very great, but we endeavoured to distribute strophanthus among the profession and trade as fairly as possible, allowing only one bottle to any one customer; besides this, we distributed a large portion of our stock to hospitals free of charge.

From the phrase "in view of the uncertainty of its action" it would almost appear that the writer may not be fully aware that strophanthus is the African arrow-poison, and we should be pleased to forward a copy of the paper upon Strophanthus, read before the British Medical Association in Cardiff, by Professor Fraser, of the University of Edinburgh. The writer should know that Professor Fraser experimented with this drug for seventeen years, and that his conclusions have not been slurred before. In his paper are given sphygmographic tracings, clinical reports, &c., that have not only been pronounced by the highest therapeutists convincing in themselves, but, so far as we know, have been verified by the experience of all who have used the drug. In view of the brilliant results obtained with strophanthus, one is constrained to inquire whether the editor of the *Therapeutic Gazette* has not, like Rip Van Winkle, been indulging in a rather protracted sleep. One might as well speak of the *uncertainty of the action* of aconitine or cocaine as to patronisingly talk of the uncertainty of the action of strophanthus. We would say to the editor of the *Gazette* that, in the words of the African, "This African arrow poison is dreadfully certain."

But this trade journal of a drug house caps the climax when it says:—"Neither we nor our patients are compelled to rely on it alone, and until the manufacturing druggists learn that the medical profession cannot be played as puppets to fill their pockets strophanthus hispidus should be let severely alone." This reminds one of Colonel Seller's reasoning about his eye-water, for the fact is overlooked that everybody does not suffer with heart disease, and that a small bottle may last for a considerable time. Aside from this, it is difficult to conceive of anything more reprehensible than the doctrine that, because a certain firm may get a profit, the patient who is suffering with orthopnoea, anasarca, and other symptoms of a cardiac disease, should, if possible, be made to get along with something else. If this is not ruthlessly trifling with disease, what is?

But the animus is best shown by the assertion "that the manufacturers of the tincture do not state that this tincture is made from the seeds alone." If there is one thing we have laid stress on it is the preparing of a pure and uniform tincture of strophanthus, made from the seeds only (according to Professor Fraser's formulæ), and we find it difficult to believe that anyone supposes for a moment we have made it from anything else.

In conclusion, we would say that the strophanthus tincture lately sold in New York was prepared from the original lot of the drug which we received. Less than a month ago we reduced the price of the tincture here from 3*s.* to 1*s.* 6*d.* per oz., for we manufactured it from seeds procured at a reduced price.

Yours faithfully,

BURROUGHS, WELLCOME & Co.

Syr. Hypophos. Co.

SIR,—Accept our thanks for your suggestion concerning the sugar in syr. hypophos. co. (see *THE CHEMIST AND DRUGGIST*, December 11, page 788). We have just completed a batch made according to it, and are thoroughly satisfied with the result. The syrup is perfectly free from smell and beautifully bright.

We find that alkalinity in this syrup is not always a desideratum; for instance, when prescribed along with tr. digitalis (often the case here) the syrup, if alkaline, makes a very disagreeable-looking mixture, whereas the slightest trace of

acidity gives, as a resultant, a beautiful clear mixture. We think the fact that digitalis and this syrup are sometimes prescribed together is frequently overlooked.

We are, yours respectfully,
S. C.

Ung. Hydrarg. Oxid. Rub.

SIR,—I have enclosed a sample of ung. hyd. oxid. rub., made in a cold mortar with P.B. paraffin, differing only from the directions by well stirring the mixed paraffins before adding to the powder in the mortar. For the thickening of the mixture the manipulator must rely upon his own experience. I think you will agree with me that this is a very satisfactory ointment, and I find it requires only about half the time in making as that in which a mortar heated to above melting-point of paraff. dur. is used. G. H. (69/39.)

[The ointment is excellent.—ED.]

SIR,—A perfectly smooth ointment can be made by rubbing down the hyd. ox. rub. with a little almond oil in a warm mortar, adding the hard and soft paraffins previously melted, and stirring the whole constantly with a pestle until quite cold.

20 New Street, Dorset Square, N.W. T. A. W. SEWELL.

Weak Tincture of Quinine.

SIR,—In my retail bottle was a little tincture of quinine, P.B. 1867, prepared with sulphate of quinine. I inadvertently added tincture quinine, P.B. 1885, made with hydrochlorate of quinine, which has been substituted for the sulphate, hence the chemical change and also the crystallisation, with the natural result—an insufficient quantity of quinine. The fine I consider too heavy. As to the secretary to the Chemists and Druggists' Trade Association reminding you I am not a member, I would like to ask him when I paid my last subscription, as I have been a member since its formation, until a year or two ago, and should have been one now had they called in the usual way for it, or reminded me what was due. Yours truly,

West Bromwich.

JOHN TUNLEY.

Linimentum Terebinthinæ.

SIR,—Permit me space in your valuable publication to give my experience on the above subject, which may prove useful to some of your readers. In the discussion on Professor Redwood's paper as reported in THE CHEMIST AND DRUGGIST last week, Mr. Martindale stated that he had used warm water to dissolve the soap. My experience is that it makes no difference in the result whether the water be warm or cold. The easiest and quickest way of making it is by using an ordinary paint brush instead of a pestle. I use warm water and well brush the soap until it is all formed into a lather, then gradually adding the camphor dissolved in the turpentine, brushing all the time. The brush I use has nothing soluble in turpentine about it, nor is it affected by the soap. In this way I obtain rather a thick and quite white semi-liquid emulsion, which gets stiffer by age and cold. I have never known it to separate.

March 14.

RICHARDS. (68/48.)

[The difference between a paint-brush and a "broad-faced pestle" is very wide, yet the result appears to be what Professor Redwood desires. We should like to know if any other manipulator succeeds with a brush.—ED.]

The Early Closing Bill.

SIR,—Allow me to refer "Albus" (66/30) to your issue of January 1, where he will see the result of the polling in English watering-places.

Teignmouth.

Yours truly,
J. J. O. E.

An Unusual Prescription.

Mr. F. H. Alcock (Birmingham) writes:—In the correspondence columns of THE CHEMIST AND DRUGGIST for February 26, 1887, p. 279, there will be found the following

prescription, which it would appear Mr. J. Cormack, of Newcastle, had met with in the ordinary course of his business:—

Powdered extract turnera aphrodisia
" " yerba santa buera
" " solanum ierebeba
" " green leaves manzanita vulg. [aris].

Turnera aphrodisiaca represents the botanical name of the plant which yields damiana leaves. As volatile oil and resin are present in the leaves, its extract would best be prepared by using a weak spirit menstruum.

Yerba buena is the name of a Californian creeping perennial labiate plant, closely allied to our ordinary hysop.

Solanum ierebeba or *S. paniculatum*, belongs to the natural order Solanaceæ, its habitat being Brazil, where the leaves, fruit, and root are used, under the name of jerubeba or jurubeba, by the people, externally in the form of a plaster and internally as syrup, wine, and extract, in affections of the liver and spleen, in catarrh of the bladder, anæmia, and amenorrhœa.

Manzanita is the name given in California to the shrub or small tree known to botanists as *Arctostaphylos glauca*. Its natural order is Ericaceæ, and habitat, the dry and rocky localities on the western sides of the Sierras in California.

The Aquarium.

SIR,—I have found the common *Anacharis Alsinistrum* a most useful plant. Failing to obtain the *Valisneria*, I used the above, and kept it for many years. It grew enormously, so that I was enabled to give away *habitats* to my microscopical friends. HEDER. (66/29.)

DISPENSING NOTES.

[The opinion of practical readers is invited on subjects discussed under this heading.]

Female Physicians.

Pharmacist (62/67) sends a prescription which he has lately dispensed, signed by a well-known lady physician. Amongst other articles in the prescription are the following:—"Norton's Chamomile Pills. One every night. Vals. 4 tumbler at 7, 12, or 2." Our correspondent adds:—"What has pharmacy descended to; or what is the use of a Pharmacopœia when such a 'script' as this is brought to us?"

Acid. Nit. Mur. Dil. and Nux Vomica.

SIR,—I had the undernoted prescription to dispense a few days ago. The customer called a day or two after, and informed me that it was different to what she had previously. The first lot she got at Brighton, and she said it was distinctly a cream colour. Now, what I dispensed was decidedly pinky. I dispensed with a "shake" label, although it was nearly clear.

Tinct. nuc. vomic.	..	..	..	..	3ij.
Salacin	..	..	..	..	3j.
Acid. nit. mur. dil.	..	..	..	..	3iij.
Tinct. chlourof. co.	..	..	..	..	3ij.
Aq. camph. ad	..	..	..	..	3vj.

M.

Sig.: 3ss. three times a day in water.

Which was the right colour?

Yours truly,

SALACIN. (67/18.)

[Mixtures containing nitric acid and tr. nucis vom. slowly acquire a pink colour, due to the action of the acid (or its products) on the constituents of nux vomica. We have observed the colouration more quickly produced by acid. nit. mur. dil., especially when the acid was fresh. The colour disappears on exposure.]

An Examination Prescription.

SIR,—How should the following prescription be mixed so as to form an emulsion? It was given to dispense at a recent

examination in London, the examiner telling the student he could make any addition he thought necessary.

Potass. ch'or.	..	..	..	..	gr. 40
Glycerin.	..	..	..	..	3ij.
Syrup. simp.	..	..	..	..	3ij.
Aquæ a1	..	..	..	..	3iv.

Mis. Ft. garg. subind utend.

J. M. N. (67/55.)

[There is nothing in this prescription to make an emulsion of; a simple solution is intended. Dissolve the chlorate in 3 oz. of water by the aid of heat: add the rest of the ingredients, and water to 4 oz. The amount of chlorate gives a solution below saturation-point; were it otherwise, heat would be inadmissible.]

Question of Measurement.

SIR,—In reply to "Cautious," the prescription should be dispensed as written if the prescriber cannot be conveniently consulted. Previous experience of the prescriber's habits possibly justifies the dispenser at the establishment mentioned in making a 2-oz. mixture. Under those circumstances he should have made a note of it on the prescription as a guide to others.

Topsy, Ph. C. (10/70.)

Salicylate Mixture.

SIR,—The following prescription was handed in a few evenings ago. As I had great difficulty in dispensing it, owing to its incompatibility, would you or some of your numerous correspondents kindly state what should be done:—

Quinina sulph.	..	..	..	gr. xx.
Sodii salicylat.	..	..	..	3ss.
Acid. hydrobromici	..	..	..	3j.
Aquæ ad	..	..	..	3viij.

M. Ft. mistura.

L. P. S. I. (69/46.)

[The hydrobromic acid acts on the salicylate of soda, precipitating salicylic acid. Salicylate of quinine is also formed if the quinine has been dissolved with the acid. The following is a good method of procedure:—Dissolve 90 grains of the salicylate in 4 oz. of water in a mortar, and to this add the hydrobromic acid gradually, stirring constantly. Rub the quinine to fine powder, mix an ounce of water with it, dissolve the rest of the salicylate in 2 oz. of water, and add to the mixture in the mortar.]

A Senega Mixture.

SIR,—The following has been dispensed. It was found that if the carbonate of ammonia was dissolved in the decoction first, and the tincture of squill and sweet nitre added after, the result was a yellow mixture, whereas if the tincture and spirit were added to the decoction, the carbonate of ammonia being dissolved in the mixture, the result was a highly coloured reddish mixture. The decoction was made 1 in 20, and boiled for ten minutes.

Ammon. carb.	..	..	..	..	3j.
Tinct. scillæ	..	..	..	..	3iv.
Spt. æther nit.	..	..	..	..	3iv.
Dec. senegæ ad	..	..	..	..	3vj.

What is the explanation?

T. C. R. (39/66.)

LEGAL QUERIES.

16/69. *J. J.*—The questions concerning hop bitters are now before a court of law, and chemists had better await with patience whatever may be the judicial decision. We have published in full all that has transpired so far, but we must disclaim any competence to make special applications of these reports. (2). We mentioned last week two apparently contradictory replies of the Board of Inland Revenue in reference to quinine and iron tonic. It is clear, therefore, that the only satisfactory reply concerning the liability of your preparation can be obtained by inquiring of the Board.

45/69. *Alpha.*—No qualification is necessary for a patent-medicine dealer except the 5s. licence, and a patent-medicine dealer may legally sell cough-mixtures, or other stamped preparations, even though these contain poison.

6/70. *Tinet. Opii.*—Our purpose in replying to these queries is that we may provide information not only to single correspondents, but to readers generally. Your condition that we should reply to your question in such a way that no one but yourself shall understand the reply is incompatible with this intention.

65/67. *Boracis* puts this case:—A Minor man having taken over a business, for many years carried on by a pharmaceutical chemist, simply places over the old outside sign his name, to read similar to the following:—

JOHN THOMPSON,

LATE

HENRY JONES,

Pharmaceutical Chemist.

Is he not misleading the public, and is it legal?

[We think this case is provided for in section 15 of the Pharmacy Act, 1868, which prevents a person, not a pharmaceutical chemist, from taking, using, or exhibiting the title.]

56/67. *Acetum.*—"What does 'entered at Stationers' Hall' mean? and to whom should I apply for particulars as to fees, &c.?"

[Registration at Stationers' Hall is necessary to secure copyright in a literary work. It costs 5s. The address of the office is Stationers' Hall Court, E.C.]

67/69. *Subscriber* says on January 13 he applied for registration of a word as a trade-mark, and he now finds from our list that a similar application was made by someone else on March 9. We presume, though "Subscriber" does not say so, that his application has been rejected. He asks how should he oppose the other person's application? He may, within two months of the date of the first advertisement of the trade-mark, give notice of opposition at the Trade Marks office (Southampton Buildings, Holborn). The other party may thereupon surrender or may give notice that he will defend his trade-mark. In the latter case "Subscriber" will be called upon to give security if he decides to proceed with his opposition, and ultimately, if both sides keep up the "bluff," the case comes before a Court. "Subscriber" would not, of course, go so far as that without taking competent advice. He would find the addresses of some experienced trade-mark agents among our advertisements.

MISCELLANEOUS INQUIRIES.

66/66. *G. W. Wood.*—A formula was given last week, page 344.

29/68. *J. Weavers.*—*Cuticura Remedies.*—The analysis of such preparations as these is very unsatisfactory, unless the presence of organic or inorganic salts is very apparent. For example, we published on February 12 a formula for *Cuticura resolvent*, taken from Kilner's "Modern Pharmacy." This formula gives aloes, rhubarb, and potassium iodide as the active ingredients. On examining the sample which you send us, we do not find either of these present. There are indications of the presence of perchloride of mercury, the rest of the mixture being made up apparently of sassafras fennel, liquorice, and spirit. The basis of the ointment is a petroleum mixture, in which some green leaves, probably the active ingredient, have been macerated, but without any other ingredient the petroleum mixture alone would be a good antiseptic ointment. We cannot detect any "active principle" in the soap.

Heder.—*Syrupus Smilacis Comp.*—The preparation which you require is probably syr. sarsap. co. of Germany, popu-

larly known as *syrupus l'affectedeur*. It differs from the American and French preparations:—*Rad. sarsæ* cont., 12; *lig. guaiac. rasp.*, 8; *lig. sassaf. concis.*, 8; *rad. chinæ concis.*, 8; *cort. cinchonæ* cont. 4; *fruct. anisi* cont. 2; boiling water, 120. Digest for three hours, then filter, evaporate to 40 parts, and make into a syrup with 60 parts of sugar.

16/66. *J. M. Frcw.*—**Embossing on Glass** is now done by mechanical means, either with a swiftly rotating wheel with emery and oil as the grinding medium, or by the sand-blast. Small operations are done by decorators with hydrofluoric acid. The surface which is not to be etched is coated with gold size, and the acid then spread over the surface. This would be the method for you to try.

67/67. *S. Rogers.*—**Vaseline** was patented, but we question if the patent would enable you to make a similar substance. It is not an artificial mixture, but the residue of the distillation of petroleum purified by filtration through animal charcoal. The secret of the success of vaseline is that the makers appear to have perfect appliances for the purification of the residue.

67/68. *Insect.*—For fastening tin to cardboard try a cement made of shellac 4 parts and methylated spirit 3 parts.

28/66. *G. T.*—You will find formula and directions for making white oils in our issue of January 29, page 155.

66/68. *Fish.*—The mixture of boracic acid and salt is sprinkled over the fish. A layer of fish is placed in a barrel, then a sprinkling of the preservative, and so on until the barrel is full. The same mixture is not used for vegetables.

67/18. *Salicylate.*—The tooth can only be repaired by a skilled dentist.

30/69. *W. H.*—The addresses of the veterinary colleges are:—New Veterinary College, Leith Walk, Edinburgh; Dick's College, Edinburgh; Veterinary College, 85 Buccleuch Street, Glasgow; and Royal Veterinary College, Great College Street, London, N.W. We cannot tell how much it will take to keep you for three years at college. Some do it for 250%, others require more than that per year. Calculate from the figures we gave you, adding 30% for books and examination fees.

13/187. *Magister* wishes a formula for a **Washing-cream**, to sell at about 3d. or 4d. per pint. Try the following:—Primrose soap, in shavings, 4 oz.; dissolve in a pint of water by the aid of heat, then add 30 oz. of water, and pour into a Winchester containing $\frac{1}{2}$ oz. of borax in fine powder. Mix in another bottle 10 oz. each of turpentine and strong solution of ammonia; add this gradually, and with constant shaking, to the soap solution, and finally make up to half a gallon with water.

66/74. *F. B. Thornton.*—The next Preliminary examination will be held on the second Tuesday of April. You must send your application and fee, fourteen clear days prior to that date, to Mr. R. Bremridge, 17 Bloomsbury Square. The superintendents in Birmingham and Nottingham select the places there to hold the examination, and inform candidates a week before it is held.

30/68. *G. Cormack.*—**Liquid Starch Gloss.**—(1.) A saturated solution of borax, 2 parts; tragacanth mucilage, 1 part. Mix. A tablespoonful to a pint of starch. (2.) Spermaceti, 1 oz.; gum arabic, 1 oz.; borax, 1 oz.; glycerine, $2\frac{1}{2}$ oz.; water, $14\frac{1}{2}$ oz. Powder the spermaceti along with the borax, and make an emulsion of it with the gum and water; then add the glycerine. You will find a formula for malt and cod-liver oil in our issue of January 22, page 114.

37/63. *C. T.*—The following is the formula to which you referred:—**Mother's Friend.**—*Ol. anethi*, m viij. ; *spt. ammon.*, arom. , 5j. ; *magnes. carb.*, 5j. ; *aque.*, 5iv. Mix, and filter, and add to the filtrate—*sodii bromid.*, 5j. ; *potassæ bicarb.*, 5ss. ; *tr. card. co.*, 5ss. ; *syr. rhæados* ad 5vj. Mix. Dose: A teaspoonful.

66/72. *W. L.*—We do not know of any fatal case of poisoning with Butyl-chloral. Dr. Lauder Brunton states that it "has a less depressing effect on the heart, and is much less poisonous than chloral." It is so seldom given as a hypnotic that poisonous symptoms may not have been observed. Dr. Murrell states that he has observed urticaria brought on by its use in whooping cough.

56/67. *Acetum.*—A coat of crude carbolic acid mixed with tar might prevent weeds growing on the bottom of a boat.

47/68. *H.C.*—**Warts** are removed by the application of strong acetic acid or any other escharotic. Small doses of magnesia have also been recommended.

28/65. *Rhubarb.*—**Tonic Wine.**—*Ferri et ammon. cit.*, 5j. ; *quin. sulph.*, gr. 20; *acid citric*, gr. 30; *malaga*, 20 oz. Dissolve and mix. The pills which you send are evidently composed of Barbadoes aloes and soap, with an aromatic. Try the following formula: Barbadoes aloes, 8 oz.; powdered ginger, 1 oz.; soap, 1 oz.; treacle and water, equal parts to mass. *Relish.*—Black pepper, 1 oz.; salt, 1 oz.; Jamaica pepper, $\frac{1}{2}$ oz.; horse-radish, $\frac{1}{2}$ oz.; shallots, $\frac{1}{2}$ oz.; mushroom ketchup, 1 pint. Macerate fourteen days, and strain. Keeps well.

Indian Brandee.—You will find the following formula to give a similar preparation to the one which you have sent:—*Tinct. capsici*, 5j. ; *tinct. myrrhæ*, 5ij. ; *tr. croci*, q.s.; *syrup. simplicis*, *sp. æther. nit.*, aa. 5iv. ; *s. v. r.* ad 5x. The preparation which you send appears to be made with methylated spirit. Add just sufficient *tr. croci* as will give the desired colour, or macerate a few grains of saffron in the mixture.

Tripe is whitened with milk of lime. You will find numerous formulæ for skin preparations in back numbers.

7/68. *L. Brau* (Dieppe).—We do not have a formula for **Hair-dye** containing permanganate of silver, but many years ago we published a formula which was as follows:—Permanganate of potash, 1 dr.; powdered gum arabic, 3 dr.; rose-water, 3 oz. Mix. Apply carefully with a tooth-brush. The dye would be better without the gum arabic, replacing it with liquor ammoniæ.

67/68. *Inquirer.*—We would recommend you to apply to Messrs. John Angus & Co., 165 Fenchurch Street, E.C.; James Gibb & Co., 16 Mark Lane, E.C.; or W. Montgomery & Co., 75 Mark Lane, E.C., for nitrate of soda. The price, of course, will largely depend upon the quantity you are able to take.

57/67. *Roderick.*—Dr. Morrell Mackenzie, 19 Harley Street, W.

47/65. *Sussex* wishes a recipe for **Violet Powder**, something above the common in quality and perfume. Perhaps with the following, and extensive advertising, he may succeed in driving all other preparations out of the market:—Purified talc, 1 lb.; boracic acid, in very fine powder, 1 oz.; orris root in very fine powder, 3 oz.; oil of ylang-ylang, 3 drops. Rub up the oil with the acid and orris for ten minutes, then add the talc, and sift.

46/66. *Allsop.*—Brewers use bisulphite of lime for preserving beer.

Beacon (18/66) and *J. A. Cocher* (41/66) will find formulæ for what they require in the British Pharmacopœia.

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containing 25 PILLS containing 100 PILLS

	s. d.	s. d.
Aconitine Crystals (Duquesnel's)	1-500 gr. 7 0	24 0
" Barb. B.P.	1-200 gr. 7 0	24 0
Aloes " Dilute (Hall's Dinner)	5 gr. 5 0	16 0
" Socotrine, B.P.	5 gr. 5 0	16 0
" and Asafetida, B.P.	5 gr. 5 0	16 0
" and Iron, B.P.	5 gr. 5 0	16 0
" and Myrrh, B.P.	3 gr. 5 6	18 0
" Nux Vomica	5 gr. 6 0	20 0
Aloin "	1-10 gr. 6 0	20 0
" "	1-4 gr. 6 0	20 0
" "	1-2 gr. 7 0	24 0
" "	1 gr. 11 0	39 6
" Compound	7 0	24 0
" and Strychnine	7 0	24 0
" Strychnine and Belladonna	7 0	24 0
Anti-Cholera "	2 gr. 7 0	24 0
Anti-Dyspepsia (Fothergill's)	2 gr. 7 0	24 0
Aphrodisiac "	16 0	59 6
Arsenious Acid	1-50 gr. 6 0	16 0
" "	1-20 gr. 6 0	16 0
Asafetida, U.S.	5 gr. 6 0	16 0
" Compound, B.P.	5 gr. 6 0	16 0
Atropine "	1-300 gr. 7 0	24 0
" "	1-100 gr. 7 0	24 0
Blue Mass, B.P.	1 gr. 5 0	16 0
" "	2 gr. 5 0	16 0
" "	3 gr. 5 0	16 0
" "	5 gr. 5 6	18 0
" Colocynth and Hyoscy.	9 0	32 0
Calcium Sulphide	1-10 gr. 6 0	20 0
" "	1-4 gr. 6 0	20 0
" "	1-2 gr. 6 0	20 0
" "	1 gr. 6 0	20 0
Calomel, Colocynth, and Hyoscyamus	9 0	32 0
" Comp. B.P.	5 gr. 5 6	18 0
" and Opium	7 6	26 0
Camphor and Hyoscyamus	5 6	18 0
" Mono-Bromated	2 gr. 11 0	39 6
Cannabis Indica Extract	1-4 gr. 7 0	24 0
" "	1-2 gr. 9 0	32 0
Cascara Sagrada Extract	3 gr. 7 0	24 0
Cathartic Compound U.S.P.	5 6	18 0
Codeine "	1-2 gr. 20 6	79 0
Colocynth Comp. B.P.	5 gr. 8 0	28 0
" "	5 gr. 9 0	32 0
" " and Blue Mass	5 gr. 9 0	32 0
" " and Calomel	5 gr. 9 0	32 0
" " and Hyoscy. B.P.	5 gr. 9 0	32 0
" " Extract, B.P.	5 gr. 9 0	32 0
Conium Compound, B.P.	5 gr. 5 6	18 0
Copaiba Compound	5 6	18 0
" and Oleo-Resin Cubebs	5 gr. 11 0	39 6
Corrosive Sublimate	1-30 gr. 5 0	16 0
" "	1-20 gr. 5 0	16 0
" "	1-10 gr. 5 0	16 0
Croton Chloral	1 gr. 10 0	36 0
" "	2 gr. 17 0	63 6
Cubebs, Oleo-Resin, with Soda	7 0	24 0
Digitalin "	1-60 gr. 7 0	24 0
Elaterine "	1-20 gr. 13 0	47 6
Emmenagogue (Mutter's)	5 6	18 0
Ergotin "	3 gr. 16 6	63 0
Enonymin "	2 gr. 16 0	59 0
" Compound	3 gr. 20 6	79 0
" "	16 0	59 0
Ferruginous (Blaud's)	3 gr. 6 0	20 0
" "	5 gr. 7 0	24 0

PILLS.

DOZ. BOTTLES
containing 25 PILLS containing 100 PILLS

	s. d.	s. d.
Hydrastine (White Alkaloid)	1-2 gr. 20 6	79 0
Iodoform "	1 gr. 9 0	32 0
" and Ircn	11 0	39 6
Ipecac, Powdered	1-4 gr. 5 0	16 0
" "	5 gr. 5 0	16 0
" Comp. (Ipecac and Opium)	5 gr. 9 0	32 0
" and Squill, B.P.	5 gr. 5 0	16 0
Iron, Arseniate	1-8 gr. 5 6	18 0
" Carbonate, B.P.	5 gr. 5 6	18 0
" by Hydrogen (Quevenne's)	1 gr. 5 0	16 0
" Iodide (Blancard's Formula)	1 gr. 7 0	24 0
" and Quinine Citrate	2 gr. 10 0	35 6
" Quinine, and Strychnine	13 6	49 6
Laxative Vegetable (Improved Cath.)	5 6	18 0
Manganese, Bin-oxide	2 gr. 9 0	32 0
Mercury, Bin-Iodide	1-16 gr. 5 0	16 0
" Proto-Iodide	1-8 gr. 5 0	16 0
" "	1-4 gr. 5 0	16 0
Morphine, Murate	1-8 gr. 7 0	24 0
" "	1-4 gr. 9 0	32 0
Narcotic Extracts (Brown-Sequard)	15 0	55 6
Nitro-Glycerin	1-100 gr. 7 0	24 0
" "	1-50 gr. 7 0	24 0
Opium, Powdered	1 gr. 7 0	24 0
" and Acetate of Lead, B.P.	5 gr. 7 0	24 0
" and Camphor	7 0	24 0
Pepsin, Pure Concentrated	1 gr. 9 0	32 0
Phosphorus	1-100 gr. 6 0	20 0
" "	1-50 gr. 6 0	20 0
" "	1-30 gr. 6 0	20 0
" and Iron	8 0	28 0
" Iron and Quinine	17 0	63 6
" and Nux Vomica	7 0	24 0
" Nux Vomica and Iron	8 0	28 0
" and Quinine	17 0	63 6
" Quinine, Iron, and Strychnine	17 0	63 6
" and Valer. Zinc	11 0	39 6
Picrotoxin	1-80 gr. 7 0	24 0
Podophyllin	1-8 gr. 5 0	16 0
" "	1-4 gr. 5 0	16 0
" "	1-2 gr. 5 6	18 0
" Comp.	8 0	28 0
Quinine, Bi-Sulphate	1-4 gr. 5 0	16 0
" "	1-2 gr. 5 0	16 0
" "	1 gr. 5 0	16 0
" "	2 gr. 7 6	28 0
" "	3 gr. 10 6	38 0
" "	4 gr. 13 0	48 0
" "	5 gr. 16 0	60 0
" Sulphate	1-4 gr. 5 0	16 0
" "	1-2 gr. 5 0	16 0
" "	1 gr. 5 6	18 0
" "	2 gr. 8 0	28 0
" "	3 gr. 11 0	40 0
" "	4 gr. 14 0	52 0
" "	5 gr. 17 0	64 0
" Comp. (Anti-malarial)	15 0	55 6
Rhubarb Comp., B.P.	5 gr. 7 0	24 0
" and Blue Mass	5 gr. 7 0	24 0
Rhubarb, Ipecac. and Soda	7 0	24 0
Salicylic Acid	2 gr. 7 0	24 0
" "	5 gr. 11 0	39 6
" Comp.	16 6	63 0
Soap Comp., B.P.	5 gr. 8 0	29 0
Squill Comp., B.P.	5 gr. 5 6	18 0
Strychnine	1-50 gr. 5 0	16 0
Zinc Phosphide	1-4 gr. 7 0	24 0
" "	1-2 gr. 9 0	32 0
" Valerianate	1 gr. 8 6	30 0

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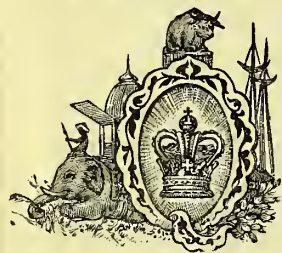
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The patentee of the "FAIRY" Lights considering the Burmese Ware very suitable for his "FAIRY" Lamps, has had made of that Ware some very beautifully designed Chandeliers, Candelabra, Brackets, Bowls, &c, which he is pleased to add to his already large and varied stock of "FAIRY" Lamps.

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Which is made up in 2/6 and 1/3 Tins, in the following Colours:—

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SAGE GREEN.	TURQUOISE. GREEN.	BRONZE.	HEDGE SPARROW'S
SMOKE. STRAW.	PEACOCK BLUE.	FAWN.	EGG TINT.
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NEW SEASON'S ARRIVED.

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Recommend their “NORTH STAR” Brand of non-congealable Cod Liver Oil as the finest and cheapest in the market. It remains brilliant several degrees below freezing point.

Write for Sample and Quotations, in Casks of 25 and 12½ Gallons, Drums and Winchester Quarts.

N.B.—OUR NEW OIL HAS ARRIVED.

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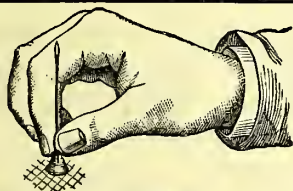
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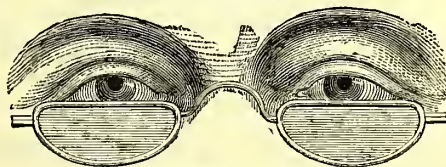
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HUMAN VACCINE, from healthy children only, microscopically examined and
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Counter Bills, with a sketch of our Factory in Norway, supplied free with name and address of customer. Those requiring them should send full address for printing. Ten Blue Trade Mark Labels supplied with each Winchester Quart. The "En Norsk Fisker" Labels, in Colours, are now sold at 2s. per 100. Medical Circulars, without name, together with neatly-packed Samples of Oil, will be sent when required.

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1-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.
COMPOUND ANÆSTHETIC ETHER,
For producing Local Anæsthesia.
In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.
OZONIC ETHER.
In 2-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s. and 12s.
PEROXIDE OF HYDROGEN.
First introduced as a medicine by Dr. RICHARDS
ETHYLATE OF SODIUM
(Dr. RICHARDSON'S Formula) for removing Nævi, &c. In ½-oz. & 1-½-oz. Bottles, with elongated Stoppers for applying the Caustic, 3s. 6d. &
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In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.
CHARCOAL CAPSULES,
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In bulk: Liq. Collodion. Co. Evans'. Contains Salicylic Acid, Ext. Cannab. Ind., and Collodion.

In vials, cased, with topped cork and camel's-hair brush. Artistic label, Chemist's own name, full directions.

See Hawley's Illustrated Counter Adjunct Book, to be had on application.

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COPY OF ANALYTICAL REPORT.

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AND
ANALYTICAL LABORATORY,
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SAMPLE MARKED
"KEMP'S N° 1 BEST LIGHT
CRUSHED LINSEED."

This sample is perfectly pure Crushed Linseed. It is made from a first-class grade of seed, and is remarkably free from dirt, soil, &c. It is free from any starchy matters. It has a bland oleaginous taste, producing no bitterness in the mouth nor any burning sensation. It shows a very high proportion of oil, viz., 44.5 per cent. and 3 per cent. of mineral matter (or ash).

SAMPLE MARKED "X."

This sample is not pure. It contains an amount of starchy matter which is foreign to pure oil of Linseed, and these starch granules correspond closely with those naturally present in German Meal. It also contains a coarse, nearly-black husk, not that of linseed. This sample has a bitter, burning taste, and imparts a hot "after-taste." It is low in oil, showing 32.44 per cent.; and it contains nearly 5 per cent. of mineral matter (or ash).

G. CARR ROBINSON.

The sample "X" was one of the many Crushed Linseeds now offering to the Trade at low prices and of nice appearance.

BENGER'S PREPARATIONS

GOLD MEDAL AWARDED, HEALTH EXHIBITION, LONDON.

"Mr. Benger's admirable Preparations."—LANCET.

LIQUOR PANCREATICUS (BENGER).

For preparing peptonised or partially digested milk, soups, &c. Bottles, 2/6, 4/6, and 8/6, with full directions.

BENGER'S PEPTONISING POWDERS.

Colourless, odourless, and soluble. One will peptonise a pint of milk, &c., in 10 to 15 minutes. Boxes of 12 powders, 2/6.

LIQUOR PEPTICUS (BENGER).

An exceedingly active fluid pepsin. Dose, one to two teaspoonfuls with meals. Bottles, 3/6, 5/6, and 10/6.

BENGER'S PEPTONISED BEEF JELLY.

A delicious quick restorative; will keep in any climate. Tins, 2/ each.

PAINE & BENDER (MOTTERSHEAD & CO.), PHARMACEUTICAL CHEMISTS, MANCHESTER.

BENGER'S PEPTONISED CHICKEN JELLY.

A nutritive delicacy for Invalids. Tins, 2/ each.

BENGER'S FOOD (Pancreatized).

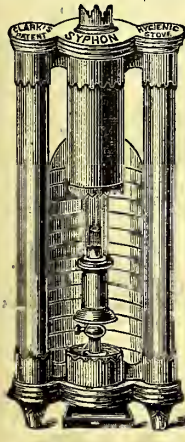
For Infants, Children, and Invalids. This delicious and highly nutritive food is distinguished from others by the ease with which it can be digested and absorbed. Tins, 1/6, 2/6, 5/6, and 10/6.

BENGER'S NEW ESSENCE OF RENNET.

For making pure whey, junkets, &c. Bottles, 1/ each.

BENGER'S PREPARATIONS are obtainable through all leading Wholesale Houses or of the Manufacturers, PHARMACEUTICAL CHEMISTS, MANCHESTER.

(Specially adapted for Chemists' Shops.)



THE
"SYPHON"
(REGISTERED TITLE)
(CLARK'S PATENT)
GAS HEATING STOVES.
NO FLUE REQUIRED.

No smoke. No smell. No dirt or trouble. No danger. All sulphurous vapours are condensed inside the Stoves, and passed off as a liquid into tray beneath. The ONLY SAFE ones for use in Hospitals, Sick Chambers, Greenhouses, Bedrooms, Halls, Shops, Offices, Churches, Schools, &c. **BEWARE OF IMITATIONS.**

Price Lists and Terms on application to
S. CLARK & CO., Patentees
(Late Hygienic Heating & Lighting Co.),
Park Street Works, Islington,
LONDON, N.
Agents: MAW, SON & THOMPSON, Aldersgate Street, London, E.C.

DINNEFORD'S FLUID MAGNESIA



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild aperient for Delicate Constitutions, Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS.

"THE BEST NATURAL APERIENT."

Persistent attempts are made by interested parties to deceive the public by offering Natural Mineral Aperient Waters with marks, names, and designations very similar to those which are used by the **APOLLINARIS COMPANY, LIMITED**, for the **NATURAL MINERAL APERIENT WATERS** imported by them.

Under these circumstances the **APOLLINARIS COMPANY, LIMITED**, feel compelled to caution the public that the **HUNGARIAN BITTER WATER** sold by the **COMPANY** always bears the name of the **APOLLINARIS COMPANY, LIMITED**, on the Label.



25/- of A1 BRAND MENTHOL will realise 48/-,

Or a Profit of 23/, which is over 90 per cent.

Send a cheque for 25/, and I will forward either of the following, together with a HANDSOME GLASS-FRONTED SHOW CASE and ROUND HANDBILLS:—

Order as
Parcel
A B C or D.

PARCEL A.
4 dozen 6d.
2 " 1s.

PARCEL B.
3 dozen 1s.
2 " 6d.

PARCEL C.
8 dozen 6d.

PARCEL D.
4 dozen 1s.

Illustrated
Price List post
free on
application.

90% PROFIT CARRIAGE PAID

Of all Wholesale Houses,
or direct from

ARTHUR W. SHIRLEY (J. G. Shirley), 30 Paternoster Sq., London, E.C.

MENTHOL Our Extra Steam Refined quality, is in firm, hard, dry and snowy white crystals, entirely free from oily contamination (and therefore of the highest melting point.) As the original and largest manufacturers in the world of the true Japan Menthol, we guarantee our brand to be absolutely pure. Beware of substitutes. For full particulars, therapeutic uses, etc. see special circulars to be had on application.

Our Extra Steam Refined Oil is treble distilled and twice rectified by steam, by an entirely new process and in apparatus of our own invention, by which all those polymeric products

PEPPERMINT of a tarry and resinous nature which are objected to by some consumers are extracted. It is of water white colour, retaining its full aroma, pungency and strength and guaranteed absolutely pure and soluble in spirits of wine.

Yokohama,
Japan.

COCKING & Co.

Established
1868.

Commission Merchants, Wholesale Druggists and Manufacturing Chemists.

OTHER SPECIALITIES.

Cod Liver, Fish and Orange Oils, Vegetable Wax and Isinglass.

Monthly Market Report and detail circulars on application.

LONDON AGENTS:—SPIES BROS & Co., 106, Fenchurch Street.

Telegram Address—"COCKING YOKOHAMA."

CAMPBOR This is the genuine essential oil as produced in the

manufacture of the Solid Camphor of Commerce. Our brand is guaranteed to be the natural oil and not the fictitious mixture of refuse Camphor and Turpentine generally sold. Having made a special study of its manufacture we have succeeded in producing a colourless oil and entirely free from any smell. It is a remedy in Rheumatism, a good solvent of resins, and the most perfect article for the use of the essential oil distiller.

WAND. SPECIAL AND IMPORTANT. WAND. THE LARGEST MENTHOL CONE IN THE TRADE.

The Full 2/- size Cone, in Screw Bottle, to Retail at 1/-

Wholesale Price 6/- per doz.

The Full 2/- size Cones, in Purple Cases ...

Usual 1/6 Cone, in Screw Bottles

Usual 1/6 Cone, in Purple Cases... ..

Usual 1/- Cones, in Screw Bottles, to Retail at 6d.

Usual 1/- Cones, in Purple Cases

Large 6d. Cones, in Screw Bottles

Large 6d. Cones, in Purple Cases

"	"	4/6	"
"	"	5/-	"
"	"	4/-	"
"	"	4/-	"
"	"	2/8	"
"	"	3/6	"
"	"	2/5	"

PLEASE SAY IF FOR HOME OR FOREIGN TRADE.

**ASK FOR AND SEE YOU GET THE LABEL OF S. WAND. CHEMIST,
LEICESTER, ON EACH BOTTLE OR CASE.**

EXPORT WHOLESALE AGENTS:—GRIMWADE, RIDLEY & Co., Melbourne, Brisbane, &c.; ROCKE, TOMPSITT & Co. Melbourne; LYNCH & Co., London and Melbourne; BUTLER & CRISPE, MAY, ROBERTS & Co., MACE & HALDANE, F. NEWBERRY & SON, London.

WAND.

THE ABOVE PRICES ARE SUBJECT TO FLUCTUATIONS OF THE MARKET.

WAND.

TOMLINSON & CO.'S "BUTTER COLOUR,"

PUREST. STRONGEST. BRIGHTEST. BEST.

Own Manufacture. Guaranteed Absolutely Pure, free from objectionable tastes or smells, aniline, alkali, or acid, and not to turn rancid or colour the Butter Milk. In extra large sized and attractive Bottles, to retail at 6d., 1s., 2s. 6d., and 4s. 6d. each, on usual terms.

IN BULK.—We quote SPECIAL PRICES if required in this way; and, being our own Printers, are prepared to supply Customers with special labels and directions for use at **COST PRICE**, and also supply small quantities of suitable bottles to fit orders at low prices, thus removing the trouble of first introducing the article. Samples and labels on application.

It is, we believe, superior to the imported or any other Colourings. Gives a splendid Golden Colour to Pomades, Ointments, &c. Send for Samples and Prices before ordering elsewhere.

READ THE FOLLOWING :—For Unrivalled Testimony, see page 42, "CHEMIST AND DRUGGIST," 15th January, 1886.

TOMLINSON & HAYWARD, Manufacturing Chemists, LINCOLN,

Proprietors of Tomlinson & Co.'s "BUTTER POWDER," for removing all bad tastes from Butter;

The "GLYCERINE DIP," for Sheep and Lambs; "GRANULAR BROWNING," for Gravies, &c.; "Patent Axle Grease," "Anti-Corrosive Boiler Composition," "Mercurial Sheep Ointments," &c.

SPECIAL.

The Hop Bitters Company, Limited, respectfully tender their best thanks to the numerous Chemists in all parts of the United Kingdom who have recently written us expressing their detestation of the dishonourable practice of trading on our reputation by the sale of compounds of so-called Hop Bitters, and offering the fullest assistance.

We appreciate the disposition shown by the trade generally against fraudulent trading, and regret that we cannot find time to send individual replies, the letters received being as numerous as they are gratifying. We trust, however, that thus expressing our thanks through the "Trade Organ" will be observed by all.

THE HOP BITTERS COMPANY, LIMITED,

26th February, 1887.

41 Farringdon Road, LONDON, E.C.

BY ROYAL



LETTERS PATENT.

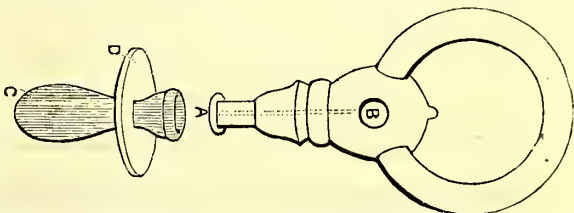
THE "LILY" BABY COMFORTER.

IMPORTANT CAUTION TO CHEMISTS AND OTHERS!!

The **PATENTEE** claims to be the **INVENTOR** of a **BABY COMFORTER**, having a passage for the admission of air into the Teat, by which means

THE TEAT ALWAYS RETAINS ITS PROPER SHAPE.

Chemists are cautioned against offering for sale any others having a passage for the admission of air.



This engraving represents the mount and unperforated teat without the rattle. A. B. shows the passage, drilled for ingress and egress of air into and from the teat.

Vegetable Ivory, with or without Rattle, retail at 9d.; with soft rubber gum ring, retail at 6d.
(These sell well; they are good value for money.)

Vegetable Ivory, superior quality, for presentation, each in neat slide boxes, retail at 1/-, including Natural History Sheet for the Nursery, 36 in. by 23 in., 96 Illustrations.

Trade terms, 4/-, 6/-, and 8/- per doz. The 6d. and 9d. on handsome cards of 1 doz.

PATENTEES—

E. MARRIOTT & CO., HASTINGS.

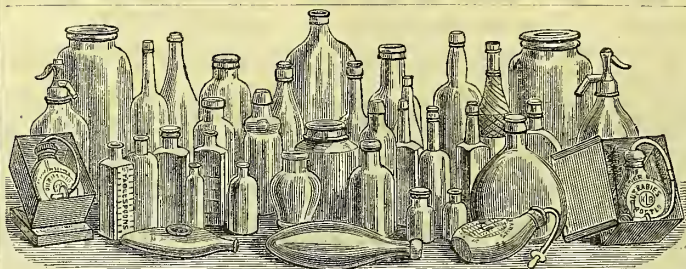
Wholesale—Patent Medicine Warehouses or Druggists' Sundriesmen.

For
Dispensing,
Drugs, Oils,

GLASS

Mineral Waters,
Perfumery,
Patent Medicines.

KILNER BROTHERS,



No. 3 Gt. N. GOODS STATION, KING'S CROSS, LONDON.

FEEDERS
in great variety,
of

BOTTLES

Best Quality.

Price Lists
Free on application.

GREAT REDUCTION IN PRICE OF GLASS BOTTLES, SYPHONS, ETC.

ESTABLISHED TWENTY-FIVE YEARS.

ROUND SHOULDER OR LIME JUICES BOTTLES.

3 1 2 3 4 6 8 10 12 16 20 oz.
2/9 3/3 4/6 6/ 6/6 7/6 8/6 14/ 15/ 20/ 22/ per gross

VIALS (Long, Medium, or Short Series).
oz., 2/5; 1 oz., 3/; 2 oz., 4/6 gross. Good quality

KALI (CONFECTIONER'S) BOTTLES.

4 6 8 10 12 20 oz.
6/ 7/6 9/ 14/ 17/ 24/ gross.

GLASS SYRINGES (Best Quality).

1/2 oz., 14/; 3/4 oz., 13/; 1 oz., 27/; 2 oz., 49/ gross.

All and every kind of Bottle made, and prices given for any particular pattern.

FEEDING BOTTLES:

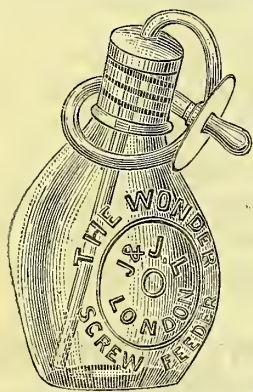
Best White Glass, China Tops, White Indiarubber Fittings, 27/ gross; Black ditto, 24/ gross.
Curved, with Screw Caps, White Indiarubber Fittings, 36/ gross; Black Indiarubber Fittings, 42/ gross.

SYPHONS: Block Tin Mounts, best in the trade, 19/ doz. f.o.b. Antwerp.

J. & J. LANG. Glass Works, Alsace and Lorraine.

37 Quai Flamand, ANTWERP; and 28 Rue Notre Dame de Nazareth, PARIS.

SHOWROOMS AT 82 HATTON GARDEN, LONDON, E.C.



BEST WHITE FLINT OVAL DISPENSING OR PERFUMERY BOTTLES.

2 3 4 6 8 oz.
6/ 7/ 8/6 9/6 10/6 per gross.

BEST WHITE FLATS.

2 3 4 6 8 oz.
6/ 7/ 8/6 9/6 10/6 per gross.

PILL BOTTLES (Metal Screw Caps).

1/2 oz., 9/; 1 oz., 10/; 2 oz., 13/; 3 oz., 16/ gross.

POMADE BOTTLES (Metal Screw Caps).

1 oz., 11/; 2 oz., 14/6; 3 oz., 19/; 4 oz., 21/ gross.

Our Metallic Capsules are superior to anything in the Market.



Syphons,
19/ per doz.
f.o.b.
Antwerp.

THE

ISLINGTON GLASS BOTTLE CO.

(H. HARRIS & CO., Proprietors),

153, UPPER THAMES ST., CITY, LONDON, E.C.

Continue to supply their CELEBRATED

DISPENSING BOTTLES & PHIALS

AT LOWEST MARKET PRICES.

6-oz. and 8-oz., 3/ per gross; 3-oz. and 4-oz., 7/ per gross; White Phials at very low prices; Stoppered Rounds, Pomades, Graduated Measures, Panel Bottles, Castor Oil Bottles, Soda Water and Mineral Water Bottles, and all other kinds at very low prices. Write for Prices and see our Samples before ordering of any other House.

Bankers—London and Westminster Bank. Established upwards of 50 years.

ESTABLISHED 1871.

WHITEHEAD & CO.,

WHOLESALE AND EXPORT

GLASS BOTTLE MANUFACTURERS,

81 and 83 BLOOMSBURY, OXFORD STREET,
MANCHESTER,

Supply every description of above in any colour or shape. Write for prices, and compare before ordering elsewhere.

OUR "W. & CO." DISPENSING BOTTLES

Are equal to anything in the market, and are 15 to 20 per cent. less than charged for similar quality goods by other houses.

Feeding Bottles, fitted and unfitted; Shop Rounds, Graduated Measures, &c., &c.

Special attention paid to Shipping Orders.

PHOENIX ESTABLISHED A.D. 1815 **MARKING INK**

GENUINE INDELIBLE

THE LEADING & STANDARD ARTICLE

PREPARED ONLY BY THE WIDOW OF THE LATE JOHN MURPHY

CHEMIST AT THE ORIGINAL ESTABLISHMENT

10, NILE STREET, EAST ROAD, HOXTON.

NO OTHER ADDRESS - BEWARE OF WORTHLESS IMITATIONS.

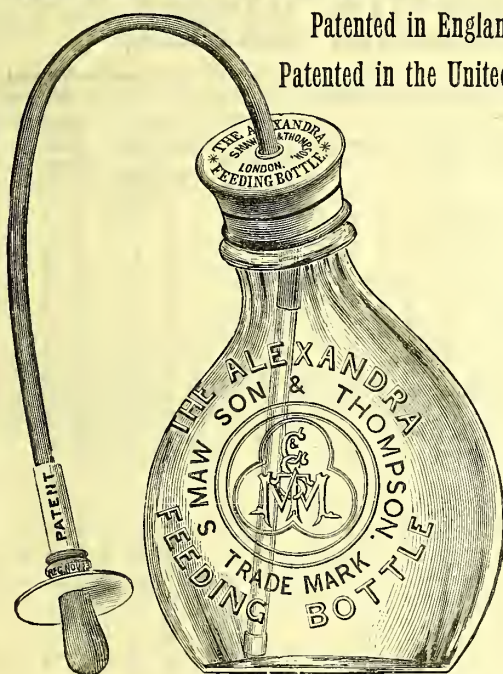
THE ORIGINAL TRADE MARK. Estab'd 1815.

MANUFACTURER OF INDELIBLE MARKING INK TO HER MAJESTY'S ARMY CLOTHING DEPARTMENT.

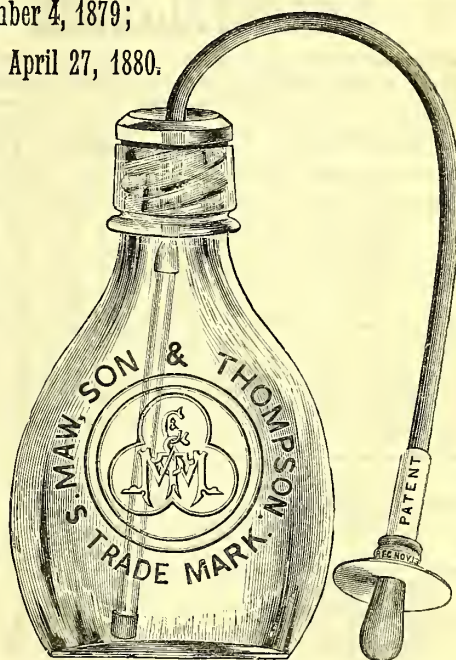
S. MAW, SON & THOMPSON'S FEEDING BOTTLES.

Patented in England, December 4, 1879;

Patented in the United States, April 27, 1880.



THE ALEXANDRA.
(Earthenware Cap.)



THE EXPORT.
(Glass Screw Stopper.)

	White Fittings.			Black Fittings.		
Alexandra, China or Wood Top Corks ... per doz.	3/8	—	—	4/3	—	—
Alexandra, 2nd Quality, Wood Top Corks ..	3/-	—	—	3/6	—	—
Alexandra, Earthenware Caps.....	—	8/-	11/-	—	8/6	12/-
Alexandra, Earthenware Screw Stoppers ..	—	—	11/-	—	—	12/-
Alexandra, Glass Screw Stoppers	4/-	8/-	11/-	4/6	8/6	12/-
Export, China or Wood Top Corks	3/6	—	—	4/-	—	—
Export, 2nd Quality, Wood Top Corks ...	2/9	—	—	3/3	—	—
Export, Earthenware Caps	—	7/3	—	—	8/-	—
Export, Glass Screw Stoppers	4/-	7/6	—	4/6	8/-	—

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 46 AND 47.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

Are manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

HOSPITAL PLAISTER,	on Black Cloth, 16 in. wide, doz. yds.	8/0
"	" on White " " "	8/0

Every other description of Plaister used in Pharmacy or Private Formulæ spread on any material, to suit any climate.

PLAISTERS, SPREAD.—Prices per Dozen Yards.						
18 Inches in width.						
NAME	Glazed Cloth	Unglazed Cloth	Linen	Swans-down	Mole-skins	Skins of Leather
Emp. Adhæsivum Opt.	4/0	5/6	10/0	10/0	20/0	4/0
Adhæsivum	3/2	..	..	..	..	..
Ammon.c.Hydrarg.	16/0	..	..	30/6	36/0	5/6
Antim. Pot. Tart.	10/0	..	..	24/0	30/0	4/0
Belladonna	13/3	15/0	24/0	24/0	30/0	5/6
Calefaciens	5/8	6/4	11/3	11/3	22/6	..
Cerat Saponis	6/6	7/6	12/0	12/0	22/6	..
Dreadnought	9/0	10/0	14/0	14/0	24/0	4/6
Elemi.	9/0	10/0	14/0	14/0	24/0	4/6
Ferri	9/0	10/0	14/0	14/0	24/0	4/6
Galbani	14/0	..	..	24/0	30/0	4/6
Hydrarg.	14/0	15/0	18/0	18/0	27/0	4/6
Iodine	16/0	..	..	30/0	36/0	5/6
Opil.	18/0	20/0	27/0	27/0	36/0	5/6
Picis Co.	11/0	12/0	15/0	15/0	24/0	4/6
Plumbi	5/6	6/6	12/0	12/0	21/0	4/0
Potass. Iodid.	16/0	..	..	30/0	36/0	5/6
Resinæ	5/6	6/6	12/0	12/0	21/0	4/0
Roborans	5/0	5/8	10/0	10/0	21/0	..
Saponis Alb.	5/6	6/6	12/0	12/0	21/0	4/0

MANUFACTURED BY W. MATHER,
DYER STREET, HULME, MANCHESTER, ENGLAND.
 PRICE LISTS SENT ON APPLICATION.
 London Wholesale and Export Agents: Messrs. MACE & HALDANE, 77 Milton Street, London, E.C.

LINT.

GAMGEE TISSUE.

(PATENT ABSORBENT GAUZE AND COTTON WOOL.)

ABSORBENT COTTON WOOL.

ROLL BANDAGES.

ROBINSON & SONS,

COTTON SPINNERS AND MANUFACTURERS OF

SURGEONS' LINTS, COTTON WOOLS,

AND BANDAGES,

WHEAT BRIDGE MILLS,

NEAR CHESTERFIELD.

Depot—55 Fann Street, Aldersgate Street, London.



J. T. COCKING,

11 Langham Street, Portland Place, London, W.,

INVENTOR, PATENTEE, AND SOLE MANUFACTURER OF

POROPLASTIC SHEETS

SPLINTS, & SPINAL SUPPORTS (JACKETS).

THE SURGEONS' LINT

V.B. QUALITY.

The superior quality of NEWSOME'S ABSORBENT SURGEONS' LINT is universally admitted. The V.B. Quality is quite pure and of great superficial area and exquisite softness.

The C. Quality is equally absorbent and pure, but stronger in fabric.

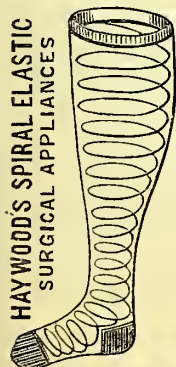
Newsome's Bleached Rolled Bandages, 3 in., 2½ in., 2 in. Also Surgical Absorbent Open Bandages. Specially Bleached and Grey Carded Cotton Wools, Absorbent and Bleached and Grey Waddings; also Sheet Waddings, Tow. &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME, Spinner and Manufacturer, Jersey Street Mills, Ancoats, **MANCHESTER.**
London Agents: B. PRATT & CO., Wood Street, E.C.

HAYWOOD'S

PATENT SURGICAL APPLIANCES.



STOCKINGS, SOCKS, LEGGINGS, &c.,

MADE ON ENTIRELY NEW PRINCIPLES.

ADVANTAGES: No Binding. No Seams. Equal Pressure throughout. Heels and Toes. Porous. Can be Washed.

Adapts to shape of any Leg.

PATENTEE AND SOLE MANUFACTURER—

J. H. HAYWOOD, CASTLE GATE, NOTTINGHAM.



USED BY SURGEONS ALL
OVER THE WORLD.

In one week recently three curious uses were reported for which
"THE LEICESTER" IMPROVED ADHESIVE PLASTER.

On Fine Flesh-coloured Cambric,
is found the best, after trying other makes (in the first case, nearly every known plaster). 1. A well-known actor said he had the good fortune to meet with it in the South of England, and had inquired for it wherever he went since. It is the only plaster he can find to answer for fixing false hair, &c. 2. A chemist in the North wrote and said a lady violinist would have nothing else; she uses it to make a pad to protect her finger. 3. A chemist in Yorkshire has a customer who uses plaster to keep his eyes open, and nothing will hold the lids up so well as "The Leicester" Improved Adhesive Plaster, on Fine Flesh-coloured Cambric. Surgeons in all parts are frequently commending it. The sale rapidly increases.

E. NATALI, SHOW CASE MAKER, SHOP AND OFFICE FITTER, 207 OLD STREET, near Pitfield Street, LONDON, E.C. Works—HENSON STREET.

SECOND-HAND COUNTERS, FITTINGS, GLASS CASES, &c., always in Stock.



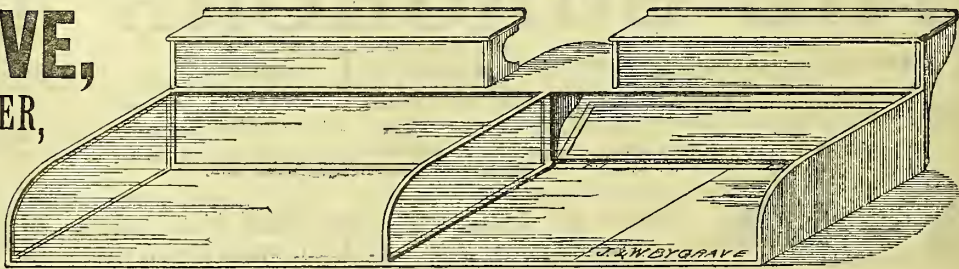
A willing mind makes light employment.

BOWLING & GOVIER,

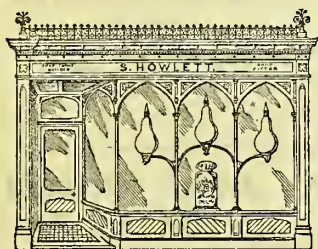
MEDICAL SHOP FITTERS AND CASE MAKERS,
GUN STREET, BRUSHFIELD STREET, BISHOPSGATE, LONDON.
Send for Estimates and List of Shops Fitted in our Modern Style.
EXHIBITION SHOW CASES OF EVERY DESCRIPTION.
Best Workmanship only, at Prices that will insure satisfaction.

BYGRAVE,

SHOP FITTER,
Curzon Street,
Wenlock St., Hoxton
LONDON, N.



Bent-top plate-glass Counter Showcase, in French polished mahogany, or ebonized, with two upright mirror plate-glass fronted shelves, and table in centre for serving over, and mahogany falls at back lined with mirror plate glass, inside fitted with crimson velvet trays—if 6 ft. long, 18 in. wide, 8 in. high (total height 13 in.). £6 12s.



SHOPS FITTED by Contract, in Town or Country, with every requisite, on the most improved principles, and at lowest prices.

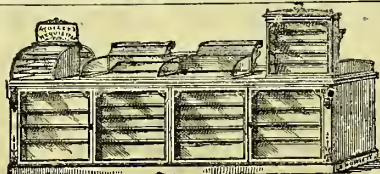
NUMEROUS REFERENCES may be obtained of Leading Chemists in all parts of the Kingdom.

ESTABLISHED 1830.

S. HOWLETT,

MEDICAL AND
GENERAL SHOP FITTER,
Shop-Front Builder and Show-Case Maker.

EXPORT ORDERS CAREFULLY PACKED AND SHIPPED.



A LARGE STOCK of New and Second-hand Fittings and Cases to be sold very CHEAP.

CABINET FITTER to the Pharmaceutical Society of Great Britain.

PLANS and ESTIMATES SUPPLIED.

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AUTHORISED AGENTS FOR PROCURING
PATENTS AND TRADE MARKS,
SOMERSET CHAMBERS, 151 STRAND, LONDON
(NEXT TO SOMERSET HOUSE).
Guide to New Patent Law and Registration gratis.

PETROLEUM JELLY,

EQUAL TO AND CHEAPER THAN VASELINE.
SANITARY FLUID AND SHEEP DIP,
THE CHEAPEST AND BEST DISINFECTANT.
GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.
Samples and Prices on application.
GRINDLEY & CO., POPLAR, LONDON, E.

THEEROLENE SANITARY DISINFECTANT AND FLUID SHEEP DIP.

NON-POISONOUS.
THE BEST AND MOST RELIABLE, AND THEREFORE THE CHEAPEST
ANTI-FRICTION GREASE, OILS, PAINTS, TAR, ROSIN, &c.
PITCH, in Boxes and Casks, from 1 lb. to 4 cwt.
Prices and samples on application.
ELVIN BROTHERS, HULL.

PERFUMES, No. 30.

FIFTY KINDS.
9s. for 20 oz., Carriage Paid.
Samples of any kind for 2 stamps.
When buying, compare my Perfumes with other makers', and buy the best.
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POCKET STAMP, WITH PENHOLDER AND PENCIL COMBINED.
From 3/- subject. Send for Lists.
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Assistance given to Manufacturers and others requiring Chemical
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Fifty per cent. discount allowed to the Trade.

Critchley's Starch Gloss

Makes Starched Linen like new. Does not stick to spider-like Materials.
Once tried always wanted. Used in the Royal Laundries. Sold every-
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Prepared only by
T. CRITCHLEY,
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"CRYSTAL WHITE" OIL OF PEPPERMINT, &c.,
DOUBLE DISTILLED AND REFINED BY STEAM.
Genuine are sealed with guarantee of absolute purity and highest quality over the
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To be obtained through the leading wholesale trade.

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NEW HYPNOTIC.
One Bottle 4/6 | One Dozen 40/
One Gross, 10 per cent. discount.
FOR SALE BY ALL WHOLESALE AND EXPORT DRUGGISTS.
BATTLE & CO., 76 NEW BOND STREET, LONDON, W.

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Licensed Valuer to the Mineral Water, Chemical,
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(BARNETT & FOSTER),
NIAGARA WORKS, 26 F EAGLE WHARF ROAD,
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S.V.R. (RECTIFIED PURE SPIRIT)

Choiceest quality at lowest rates.
Export and Home Consumption.

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To all those of either sex who have lost or are losing
their Hair,
CAPPER'S THE HAIR
CRINIDONE, PRODDUCER,
WILL PROVE A BOON.
Thousands of living Testimonials testify to the
efficacy of "CRINIDONE." In bottles, 1/ each.
Wholesale Agents—EVANS, SONS & Co., Liverpool.
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S. SAINSBURY'S

Prepared from the finest
ENGLISH LAVENDER,
without any foreign whatever.
Lavender
176 & 177 STRAND, LONDON. **Water.**
Wholesale and Shipping terms on application.

POWELL & BARSTOW,

5 Albion Place, Blackfriars Bridge, London, S.E.,
Late W. HURLSTONE & CO., Blackfriars Road and Vine Street, S.E.,
MANUFACTURERS TO THE WHOLESALE TRADE OF
ELASTIC GUM SURGICAL INSTRUMENTS.
WORKS, LAMBETH. ESTABLISHED 1830.

TRADE MARK STYPIUM REGISTERED

ANTISEPTIC DRESSING
FOR FOUL DISCHARGING SORES, CANCEROUS ULCERS,
PILES, FISTULA, &c.
MADE UP IN 1/2-lb. AND 1-lb. CASES.
STEPHENSON & TRAVIS, 12 Hopwood St., LIVERPOOL

"SPÉCIALITÉ" LIME JUICE

(NO MUSTY FLAVOUR).
For Sample and Terms
FELTOE & SONS,
ALBEMARLE STREET, LONDON, W.
Can be obtained through the Wholesale Houses.

HIGHEST AWARDS OF MEDALS & DIPLOMAS OVER ALL AMERICAN & FOREIGN COMPETITORS

AT MORE THAN
THIRTY INTERNATIONAL, STATE, AND LOCAL EXPOSITIONS.

To the 35 Medals already Awarded we take pleasure in adding the Highest Awards—**SILVER MEDALS**—given at **Liverpool, 1886, and Edinburgh, 1886.**

MEDICAL JURORS' AWARD, PHILADELPHIA, 1876.—"ORIGINALITY: The successful application of Rubber as a base for medical and mechanical plasters." "RELIABILITY and general excellence of manufactures."

A VERDICT UNIVERSALLY SUSTAINED.

Firmly recognising the fact that the success of the medical practitioner and the surgeon depends in no small degree upon the integrity of the remedial agents and appliances which they employ, we have persistently adhered to the policy of making, in all our products,

BUT ONE QUALITY, AND THAT "THE BEST."

Our facilities for the production of our specialities are unequalled in extent and completeness by any other concern in the World. Our establishment represents an industry of which we are the founders, and which owes its universal recognition to our investigations and our efforts to bring these preparations up to Pharmacopœial standards and the necessities of medical and surgical practice.

The status of the whole plaster business is well shown by the analysis of Belladonna Plasters, the leading article on the list of spread goods, made in March, 1886, by Dr. Albert B. Prescott, Professor of Chemistry at the University of Michigan, and President of the American Chemical Society, from goods purchased by him in open market. The assays were made by the same process, in parallel operations, for the quantity of total belladonna alkaloids, estimated as atropine, with the following results:

BRAND OF PLASTER.	Per Cent. of Atropine in the Plaster Mass.	Quantity of Atropine in one Plaster (avg)
Seabury & Johnson	0.39	0.543 grains
Grosvenor & Richards	0.17	0.264 "
T. W. Heinemann	0.15	0.230 "
Geo. E. Mitchell (Novelty Plaster Works)	0.05	0.045 "
The Porous Plaster Co. of the Village of Sing Sing, Proprietors of Allcock's Porous Plaster (Star Brand)	0.06	0.062 "

We have repeatedly demonstrated the

SUPERIORITY OF OUR ABSORBENT COTTON, LINT, AND GAUZE,

and the utter lack of absorbency which characterises several other makes. This is a matter easily tested by dropping a bit of the cotton or lint into water, and noting the rapidity with which it sinks to the bottom. Extreme absorbency is important when absorbent materials are desired at all. Some of our competitors are crafty enough to purchase our own lint and cotton, and re-wrap them under their own labels, for the purpose of making tests, but uniform excellence will be found only in goods bearing our brand.

THE PERFECTION OF OUR GOODS

means an outlay of time and money which forbids our attempting to compete for the "Cheap John" trade, but no other manufacturer can place upon the market goods equal in quality to our own at as reasonable prices as prevail throughout our list.

DISCHARGED EMPLOYEES AS WOULD-BE COMPETITORS.

We are obliged to issue a word of caution to physicians and the trade against parties who advertise themselves as manufacturers of plasters, and base their claims to confidence on the assertion that they have, at some time or other, been in the employ of Seabury & Johnson. This claim is usually made to convey the impression that the claimant was our "Superintendent," or occupied some position which made him master of the details of our business, and qualified him to operate works of this class. Thus far among those who have attempted to trade upon their past connection with us are a discharged night watchman, a foreman of one of our departments, and a former engineer and general mechanic. Not one of these men possesses or can possess the slightest knowledge of pharmacy, and no man has ever left any department of our factory whose services it was worth while to retain. Nearly every merchant, especially if he be also a manufacturer of anything, has had experiences similar to our own, and in view of the facts stated will readily understand, when offered goods claimed to be made after the formulas or by the process employed by us, that all such claims are spurious and are made with fraudulent intent, and that the goods will in no way resemble our own, either in their composition or their durability. A fact of which further assurance can be obtained from a careful comparison of analysis of the two makes. We have taken legal steps to protect the trade and ourselves from the fraudulent pretensions of this class of pretenders, which is liable to be increased every time we discharge an employé.

SEABURY & JOHNSON,

1 AND 2 AUSTRALIAN AVENUE, LONDON, E.C. (H. C. MASON & CO., Agents),
PROPRIETORS OF THE SEABURY PHARMACAL LABORATORIES,
Manufacturers of Indiarubber Pharmacopœial and Surgical Plasters, Antiseptic Dressings and Absorbents, Bandages, Oiled Silk and Muslin, and Surgical Dressings of all Descriptions.

GEO. J. SEABURY, President.

J. M. PETERS, Treasurer.

ROBERT J. SEABURY, Secretary.

LYNCH & CO., LONDON.

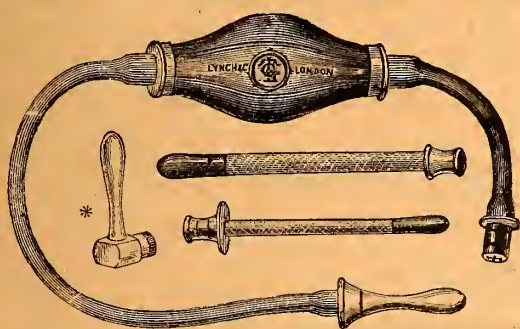


LYNCH'S

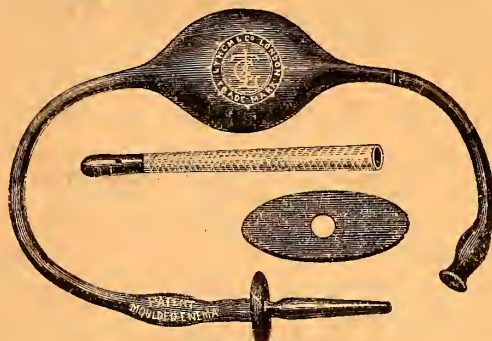
PRIZE MEDAL.



SYDNEY. 1879.



No. 436.



No. 435 D.

ENEMAS.

	Per Doz.	£	s.	d.
433a. HIGGINSON'S grey india-rubber, with rectum pipe only, in slide cedar box		1	3	6
433b. Ditto, with elastic-gum vagina pipe and leather shield		1	6	6
434. Ordinary Higginson's, barrel shape, with bone rectum pipe, elastic-gum vagina pipe, to plug on, and patent leather shield, in slide cedar box		1	14	0
If fitted with nickel-plated mounts	extra	0	4	0
434a. Ditto, with disconnecting mounts		1	16	0
If fitted with nickel-plated mounts	extra	0	5	0
435d. LYNCH'S (Higginson's principle), black, green, red or white india-rubber, requiring no metal mounts, in one continuous piece, warranted not to split, fitted with vulcanite rectum pipe, elastic-gum vagina pipe, to plug on, and patent leather shield, in slide cedar box		1	16	0
436. LYNCH'S FAMILY (Higginson's principle), fitted with bone bulb-pointed rectum pipe for adults, elastic-gum vagina pipe, and elastic-gum rectum pipe with bone shield for children, in mahogany box		2	9	0
437. Ditto, in slide cedar box		2	3	0
If fitted with nickel-plated mounts	extra	0	6	0
437a. LYNCH'S PERFECTION, in mahogany box		2	17	0
If fitted with nickel-plated mounts	extra	0	7	0

 Nos. 436 to 437A can be fitted with *New Angle Pipe at 4/ per dozen extra.

Discount—10 per cent. Monthly, 5 per cent. Half-yearly Account.

SPECIAL QUOTATIONS FOR 12 DOZEN AND UPWARDS.

LYNCH & CO., ALDERSGATE STREET, LONDON, E.C.

Australian Branch—15 Vaughan's Chambers, 48 Queen Street, Melbourne.

SOLE AGENT—MR. RIVERS LANGTON.

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Have the pleasure to announce to the Trade that they have been appointed

SOLE AGENTS

FOR THE

CARLSBAD SALTS AND WATERS.

Full details will be forwarded shortly
per circular.

CADBURY'S COCOA ESSENCE

The medical profession order Cadbury's
Cocoa Essence in thousands of cases, as
the most wholesome beverage. Be sure

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is
declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

Telegraphic Address—"Sumner Liverpool."

R. Sumner & Co.,

WHOLESALE & EXPORT DRUGGISTS,

50a Lord St., LIVERPOOL.

DRUG GRINDERS,

WAX BLEACHERS,

PILL COATERS,



ESTABLISHED 1844.

MANUFACTURERS OF ALL
CHEMICAL
AND PHARMACEUTICAL
PREPARATIONS.

ESS. GINGER ALE.

THE FINEST OBTAINABLE; especially suited for Export, because it keeps better than others. True Belfast flavour.

TEMPERANCE WINES.

Non-Alcoholic; require no licence.

SYR. HYPOPHOSPH. COMP. Alkaline; Cloudy.

COSMINE. A smooth, tasteless, odourless Petroleum Jelly. A natural product imported from Pennsylvania, refined and purified by patent process. Larger sales every year.

CHLORODYNE LOZENGES. **COD LIVER OIL** (Special Quality; Non-freezing; Finest Pale).
COMPOSITION ESSENCE.